COMMON SENSE IN EDUCATION

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TEACHING AND ORGANISATION

WITH SPECIAL REFERENCE TO
SECONDARY SCHOOLS.

A Manual of Practice. Chapters by Various Writers.

EDITED BY

P. A. BARNETT, M.A.

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COMMON SENSE
IN EDUCATION
AND TEACHING,

AN INTRODUCTION TO PRACTICE

BY

P. A. BARNETT, M.A.

TRINITY COLLEGE, OXFORD

SECOND EDITION

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1900

TO

EDWIN ABBOTT ABBOTT D.D.

A GREAT TEACHER AND A TRUE FRIEND

THIS BOOK IS DEDICATED

WITH RESPECT AND AFFECTION

BY AN OLD PUPIL

LEONATO—*Neighbours, you are tedious.*

DOGBERRY—*It pleases your worship to say so, but we are the poor duke's officers; but truly, for mine own part, if I were as tedious as a king, I could find it in my heart to bestow it all of your worship.*

—(Much Ado About Nothing).

ADVERTISEMENT

THE basis of this book is a series of lectures, delivered during the winter session of 1898, on the practice of education. It would hardly, however, have been written, it would certainly not have been published, but for the welcome extended by both critics and general readers to the volume edited by me and published in 1897 under the title of *Teaching and Organisation*, which was an attempt to cover the whole of the ordinary field of education in chapters written by specialists who are also experts, teachers as well as teachers of special subjects.

When *Teaching and Organisation* first appeared, the value of the several chapters was acknowledged generously, but some critics of unquestionable authority thought that the book suffered somewhat, in spite of the Editor's efforts, from lack of a common point of view, of organic interconnexion.

Common Sense in Education does not presume to take the place of *Teaching and Organisation*.

It is meant rather to serve as preliminary to it, as an introduction to the systematic study of education, less perplexing because more uniform, being the record of the experience and observations of one person, whose business it is to form an opinion about teaching and teachers in both primary and secondary grades, and who is concerned particularly to discover what things most profitably occupy the attention of the teacher at the beginning of his career. With all its obvious imperfections, it has at all events been written from one point of view.

It is not too much to say that every teacher and every one concerned in education should have some acquaintance with most of the subjects broached or discussed in the following pages; they are all directly or indirectly related to the practice and organisation of education as teaching.

An endeavour has been made throughout to keep discussion as clear as possible from the formalism that comes of attempts to systematise a science before it has passed out of the empirical stage, and if technical language is anywhere used, it is used because it could not well have been avoided. I have always had before me the warning not to complicate simple things by giving them hard names. A hard name is usually a step farther in abstraction, and argument on abstractions is argument *in vacuo*, safe only so long as we do not forget that its conclusions are to be accepted without qualification *in vacuo* only.

One word I should like to say in support of the expert against the specialist. In these days of subdivision of labour and divided interests we are sadly exposed to bullying at the hands of the patrons of special "subjects". It is the business of teachers and of all practical friends of education to defend jealously the general and liberal gymnastic against the attacks of those who, interested in a particular study or impressed by the immediate practical results of a particular pursuit, would monopolise with it the greater part of the school Time Table. A school Time Table, like all syllabuses, is best when it is simplest, for excessive prescription and definition of duty are the refuge of helplessness and pedantry. The more minutely the subjects of school work are delimited, the less copiously and effectually will pupils be taught.

I am indebted to many friends and friendly critics for hints embodied in the pages that follow, to so many that I dare not print their names. I cannot, however, evade the duty of thanking my friend and former pupil Mr. R. Delaney for his equal kindness and skill in the compilation of my index.

P. A. BARNETT

June 1899

PREFACE TO SECOND EDITION

THE first edition of this book has been more kindly received and has succeeded better in the end which was proposed than the author had any right to expect. In more cases and places than he hoped it has stimulated discussion and led to a reconsideration of some accepted opinions and practices which seem to have achieved a popularity not entirely deserved.

The author is indebted to friendly critics for many helpful suggestions, and if a longer interval had elapsed between the first appearance of the book and the call for a second edition, he might have felt it desirable to strengthen some of his positions and to extend some of his arguments. As it is, though he has gratefully profited by all criticisms, he has adopted some only which seemed to him to have indubitably found joints in his armour.

P. A. B.

April, 1900.

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PRESENTED BY
[illegible]
OF UTTARPARA.

CHAPTER I

INSTRUCTION AS DISCIPLINE

Mind . . . grows, not like a Vegetable . . . but like a Spirit, by mysterious contact with Spirit; Thought kindling itself at the fire of living Thought.

—Teufelsdröckh in *Sartor Resartus.*

There can be no rigid rules of procedure in instruction

THE endeavour to lay down rigid rules of procedure in teaching is a serious error in education. It would have its analogue in medicine if the physician prescribed for his patients, without seeing them, by sending a printed formula of directions in reply to an inquiry by post. It is precisely in the diagnoses of different cases and in the variations of treatment required by different individuals that medical skill does its most characteristic work; for while any one can learn to repeat a general formula, the expert alone can safely apply it with modifications necessary to complicated individual circumstances. There is undoubtedly a constant type or formula in both education and medicine, for both minds and bodies have respectively a large common foundation; every mind and every body is more or less like every other mind and every other body. Yet for the teacher the important fact is diversity; the immense significance of which, while it is brought home over and over again to those who philosophise truly, is often wholly ignored by both rule-of-thumb men and cut-and-dried theorists, for these, in their different ways, philosophise badly by trying to fit every mind to the few types recognised by themselves.

Again, it is true that the materials which we bring to operate upon minds and bodies respectively are, within their respective limits, the same. The object of knowledge is a unity; it is ultimately the same for all, as the composition of food or medicine is pretty constant. But a physician administers a potion and a subcutaneous injection in vastly different ways.

True philosophy brings home to the teacher chiefly the diversities of both pupils and subjects

The teacher's special work calls upon him to take more serious note of diversities than resemblances. The philosopher in his study, the psychologist or the logician, may lay down the general laws of the growth of mind or the conditions of valid inferences, but the teacher has to keep his wits alert to modify his treatment from time to time so that it may suit Tom, Dick, and Harry at different times, in different places, and with different subject-matter. In comparison with a practised wit and sympathy, mere theorising is naught.

Diversities between pupils

The differences between Tom, Dick, and Harry as persons have to be considered first. For many a long year, as Principal Adams points out in his witty little book on Herbartianism, the pupil as a subject for consideration was systematically neglected. The sole preoccupation of the teacher was the subject-matter of instruction; as much of this was to be got under the pupil's skin as the skin would hold, and we need not be surprised if it was by physical applications to his skin that the process was expedited. For, at the outset, the error arose from an analogy of purely physical and exceedingly material origin. The implied assumption was that there was somewhere a capacity—a room or space—which had only to be filled, into which stuff could be forced. Locke's comparison of the child's mind to a sheet of white paper on which anything could be written was merely another form of this pestilent heresy.

Respect for childhood as having its own perfection

From this we have been rescued, at all events theoretically, by more modern conceptions of perfection—or one may say, rather, by giving up the outworn Pagan notion of a moderation or harmony in some fixed and settled state, and by recognising in its place, not inferior kinds of virtue or perfection in various stages, but virtue or perfection itself in a *process.*

The greater respect for childhood, for what we choose to call immaturity, which is the mark of the more modern rational treatment of children, is not to be set down solely to the influence of the doctrine of evolution. It is quite true that the more modern development and scientific application of this great generalisation, which teaches us that all things are in the condition of becoming something else that they are not now, gives to imperfect states of development a value of their own which was not before suspected, and warns us not to hurry them. But long before the world adopted the theory of evolution as a fashionable explanation of everything, Froebel had laid it down that "imperfect" childhood had really a perfection of its own; and that the child-stage of development had its own laws, and required a special treatment which was not the same as that properly applied to older persons.

We have come next to recognise not only that children generally must be treated as persons in process of development rather than as persons developed, but also that children differ among themselves, mentally and physically, and in antecedents and habitual environment. Progress is either slower or quicker, and more or less effectual, among different pupils.

Diversities of (*a*) age and (*b*) status

There is first, the allowance to be made for differences of age. We do not teach, say, the history of the Armada in the same way to pupils of ten years, fifteen years, and nineteen years of age; to the first it is more properly a panorama; to the second it begins to have political meaning and more definite personal interest; to the third it is a study of evidences and intrigues, part of a great European system of politics. There are next to be considered the differences of status and antecedents, social and intellectual. The pupil who comes from more refined home surroundings may safely be left to fill up gaps in knowledge which for the less-favoured child the teacher must himself fill up. The teacher of the true secondary school can usually count on his pupils' freer access to books; he can refer them, in their degree, to "authorities"; he can, with less scruple, make them do "home lessons"; they need far less predigestion and spoon-feeding. The misuse of the maxim *nihil per saltum* is bad enough in the primary school. It is worse in the secondary. We ought to leave blanks purposely, so that the pupil may himself supply the omissions. We can take more for granted in the secondary than in the primary grade, for the secondary pupil has usually a larger vocabulary and all that this implies.

On the other hand, the primary teacher can generally expect in his pupils a certain shrewd knowledge of the present needs of daily life which more delicately sheltered children will lack. Buying and selling, for instance, are much closer to the experience of the poor child; therefore problems connected with the provision-shop abound quite properly in the arithmetical puzzles propounded to little children in the primary schools; but they are not so suitable elsewhere. Again, we risk less in teaching a spoken language analytically in the secondary school than in the primary. The pupil of the secondary grade more generally lives amid surroundings in which the vernacular speech is conversation; and if it is a foreign tongue that is in question, he has more chance of hearing it used as a living method of communication at a later stage. But if the primary scholar gets more than a very moderate supply of analytical grammar and paradigms, we may be sure he will always remain in that state into which it has pleased a stupid pedagogy to call him.

Diversities in subject-matter, and influence on practice

Differences in subject-matter are equally important. For though pupils differ infinitely one from another, and though nature has been as lavish of opportunity to some as she has been curmudgeonly to others, yet skilful teaching can perform marvels when learners are willing. But the subject-matter used in teaching is very stubborn.

Subjects differ, first of all, in regard to the qualities of mind which they severally call into play and the aim to which we address ourselves by using them. The lesson in grammar is not easily made a lesson in literature. In teaching grammar we wish to cultivate mainly the power of logical analysis, the discrimination of words and phrases according to their various functions in relation to one another, without regard to the effect which they are meant to produce on the feelings. In literature, the emotional or impressive effect is just everything; it is taste, liking, admiration, that we wish to quicken and regulate. Even Reading we may teach, and indeed, we ought to teach, for different purposes, and therefore in different ways, at different times. To-day it may be designed to cultivate mainly distinctness of speech, to-morrow right emphasis, at another time the elements of oratory. We ought not, for similar reasons, to teach a modern spoken language as we teach "classics," nor English as we teach either Latin or French. In English we start with a large basis of speech already acquired; we need not, then, teach declensions, conjugations, and such other analytical devices, seeing that our pupils know them. Our chief object in teaching English as a language is to make it copious and effective in our pupils' mouths. The lists of words become less unreasonable in a living foreign tongue because under the best circumstances our pupils will lack a large supply of phrases; though even here we should follow the hint which is given us by the natural method of learning the mother speech. But in the teaching of Latin and Greek, the word and not the phrase may be pardonably made the unit.

It is the business of the good teacher, then, to vary his procedure according as his perspicacity and sympathy enlighten him about his pupils' condition and needs. Pupil differs from pupil, and the same boy will be a different person at various times; form differs from form, and the same form may have its corporate moods and fancies. The varying "stuff" of knowledge cannot in all cases be treated with the same details of procedure, but must vary according to the instruments which it uses, the qualities it quickens, the teacher's aims.

There are no "methods" which we can apply rigidly to stated cases. The only infallible prescription is that the teacher should be infallible; for so we come back to the greatest of all teaching rules: to become good teachers we must teach well. The best we can do is to take the pupil by the hand and to feel the way *with* him, not merely *for* him.

For practical purposes we may lay it down that we teach either in order to extend our pupils' knowledge or to cultivate his dexterity in execution. In an ultimate analysis the same process is followed in both cases, but we can here afford to consider instruction solely from the point of view suggested by the common phrase "imparting knowledge".

Yet there is a standard type of teaching

In the midst of all diversity the true type of teaching is constant. The diversity arises inside the universal scheme which all good teachers follow; the differences are in details which are modified to suit individual cases, but in details only. The main process alters only in so far as its various stages are more explicit or less explicit. The formulation of this type is one of the great services rendered to rational education by the followers of Herbart, but all good teaching has, of course, approximated to it at all times; bad teaching, so far (being a procedure) as it was bad, has always fallen away from it. All of us, in our occasional triumphs, have duly (1) prepared the way properly, (2) presented our new matter acceptably, and (3) called upon the class to make its original contribution and draw its independent conclusion. But the possession of a standard by which we can measure our performances is of great service to us; it is at least a reminder of what is expected of us. This useful standard is put at our disposal in the five common "stages" or "steps" in instruction which, with insignificant variations, all the writers of this school approve. If any of us have passed under the hands of inefficient teachers, it will be easy for us to locate *their* faults, if not our own.

It is essential to remember as a preliminary, that knowledge is not a "kingdom" cut up into "provinces"; it is not a vessel composed of water-tight compartments; if, when the human mind deals with it, it is like light decomposed in a prism, we must remember that one colour fades by insensible gradations into all the rest. The minutest of our subdivisions, even those defined by examining bodies, are inseparable from the rest; just as the human mind itself in all its operations is the same mind. For the convenience of thought and business, more or less legitimate, we have split up the area of knowledge into little fields; but every branch or item of knowledge may illustrate, help out, complete, any other branch or item.

The formal stages in the imparting of knowledge

Let us examine the formal "stages," and see whether we can generally apply a knowledge of them to practice, and with what cautions.

Statement of Aim

We naturally begin by letting our form know what our aim is. The more shortly and clearly this is done, the better. Some "trained" teachers in giving a set lesson think it necessary to beat about the bush, to get the class to guess what they are driving at, by a process recalling the "animal, vegetable, or mineral" game of our youth. In fact, the pupils begin by putting themselves into a thoroughly false attitude. They enter on a kind of guessing competition, striving to find out what is in the teacher's mind, *what he wants them to say.* This is bad teaching. Once upon a time, for instance, a master was about to give a lesson on marble to some small boys, and began, for some occult reason, by asking his class to tell him the names of various stones. He thus "elicited" hearthstone, blue-stone, granite, kerb-stone, sandstone—everything but marble. At last he tried another tack. "Do you ever," he asked, "go for walks on Sunday—in the churchyard?" "Yes, sir," said a little boy. "And what do you see there?" "The tombstones." "Well, don't those remind you of another kind of stone? Think, boys, think!" "Please, sir, *brimstone.*"

Now this teacher should have told his boys without any preface that he was going to give them a lesson on marble; there was not the least reason for beginning his work by getting them to guess what was in his mind. This is one form of the misuse of what is called the "Socratic" method—to be discussed more fully later on. The Socrates of some of the Dialogues used to lead his victims by means of questions to some conclusion quite different from that which they expected; which anybody, philosopher, or barrister, or pedagogue, can do if he is allowed to have his own way in the arrangement and form of his questions. There was no judge present to moderate the questions put by Socrates, nor is there in the case of the catechising teacher, who may therefore make his pupils say what he wishes them to say and may think that he has thus scored a point. No doubt he has, but it is not a point of much importance; he has not necessarily *taught* anything at all.

The truth is that nothing can be gained by concealing from our class the immediate object of our instruction. In the case of very young children, to be sure, we may be forgiven if, as a whet to appetite, we start with a little brief mystery before we produce (say) the apple which is to be the subject of the lesson; but we must not tire out their slender powers by setting them to guess-work before we come to real instruction. Later on in school-life, mystery is even more out of place. In dealing with a class averaging twelve or thirteen years of age we cannot, fortunately, conceal the equator under a duster and triumphantly elicit the sacred name before we tell our boys that that mysterious line is to be the subject of our lesson. We more properly begin by finding what various members of the class already know about it. Later on in a pupil's life, the "statement of aim"—to use the technical name for this preliminary to all teaching—is generally implicit; it lies, in fact, in the time-table. We go on from where we left off—say, the hundred and fiftieth line of the first book of *Paradise Lost*;—unless, of course we are opening up a subject of investigation which stands out as something distinct—say, for instance, the laws of Miltonic versification.

The point to be remembered then is this: that we must go to work without circuitousness or unnecessary circumstance. The Apple need not suggest a series of questions recalling Man's First Disobedience and the Garden of Eden generally, nor even "what we sometimes have in puddings"; the equator need not be approached by a dissertation on the cocoanuts that grow in tropical countries; and no teacher, I imagine, need begin a series of lessons on Milton's verse-writing with remarks about the *caesura* in Latin pentameters.

Ultimately, of course, these pairs of ideas or topics are severally connected with each other, and their juxtaposition may be of great educational value; in the meantime, however, the forcible association of each pair by means of questions fired off at this stage by the teacher, would be work done mainly by himself, not mainly by the class: and that is bad teaching. The class should see before it an object of attainment; it should not be led by the nose. It is not however necessary, nor even often desirable, in teaching little children or boys and girls, to parade the name of the particular logical subdivision of science or knowledge with which we are going to deal. We need not write upon the black-board the words "Geography," "History," or "Botany" before setting out; to do so is to emphasise the logical differences between "subjects," whereas our chief business, in accordance with sound psychology, is to cultivate a sense of the *continuity* of knowledge. But our immediate theme—the basin of the Thames, the Corn Laws, or the Germination of a Bean—cannot be propounded too clearly.

Preparation awakens expectancy and appetite

We come now to the first so-called formal step in the process of teaching, the step technically known as Preparation. In stating our aim, we effected a rough kind of synthesis; we pulled our pupils' ideas together, so to speak; concentrated their attention on one thing. The Preparation stage is analytical; and we shall find that in good teaching synthesis and analysis alternate regularly. We must first find out what the class already knows of the subject in hand; and we should begin boldly by asking *Who can tell me anything about this apple . . . the equator . . . Milton's versification?* The pedantical or mistrained teacher shrinks from such an "omnibus" question. He prefers to put a little question to Tom, another to Dick, another to Harry, with the intention, no doubt, of building up an edifice after his own plan. This was, as he understands it, the method of Socrates, and it has the results sometimes attributed to the work of that great philosopher: it stimulates a very, very small minority, if any of the class happen to see what he is driving at, but it completely silences the greater number, who either regard him and his teaching with indifference or would gladly offer him hemlock.

Our first duty, then, is to get all we can, in a form as full as possible, from any one willing to speak. We thus set every pupil "rummaging" about in his stock of ideas to see what he can find that is pertinent; we cultivate the habit of looking for things that may have perhaps slipped out of consciousness; and we keep alive the self-respect that makes the pupil the teacher's willing companion instead of his trailing captive.

We should let our pupils in this way build as much as possible for themselves. There are very few stages of pupilage, above of course the very lowest, in which some members of a class will not have a few details at least which the master has not. If the master tries to get his pupils to build exclusively from the supply of bricks carried in his own hod, he is a stupid, because a wasteful teacher. But when the class has produced all that the teacher judges can be contributed spontaneously, he will arrange this in the most profitable order by a few judicious summarising questions; placing two facts side by side and making the class recognise one as cause, the other as effect; adding something pertinent here, removing the irrelevant there; in short, preparing the ground for the formal step that naturally follows next.

Presentation

The stage of Preparation has been, in the main, a process of analysis. It is true that in setting our house in order we do synthesise; but the teacher's most important aim, so far, has been to render available what his pupils have in stock; the setting in order was merely an introduction to the next step, Presentation of new matter, rather than the essential part of the Preparation. That is, the stage of Preparation was mainly analytical, whereas the stage of Presentation is to be mainly synthetical.

The attempt to "elicit" everything is a great snare

We may add to a boy's stock of knowledge in three ways only. We can make him observe, we can make him infer, and we can tell him what we want him to know. What we cannot do is "elicit" from him by dexterous questions knowledge which he did not possess before we set to work. The word "elicit" is a kind of Mesopotamia for sanctity and potency with the over-formal teacher; and the procedure which it usually implies is no less wonderful, for whereas it was used by Socrates generally in order to show his victims that they knew nothing, it is used in our schools by the imitators of a degenerate Socrates to show their pupils that they really know everything. And the worst of the matter is that it may be made to do one thing or the other, as Socrates' own practice showed, for instance, in the *Meno* dialogue; the essential and corrupting fact being that the teacher does all the work and the pupil speaks—nay thinks—only on invitation and on a line prescribed. He is, in other words, led by the nose. And this is the origin of endless aimless chattering.

We may, then, make (1) our boy observe for himself by showing him what to look for and how to look for it; or we may (2) lead him to see causal connexion between two facts or sets of facts; or we may (3) tell him. To tell him is often, not the shortest way only, but also the best way; but how much of one or another procedure is to be used must be determined by the teacher's tact and perspicacity. The better we succeed in getting our boy to put forth effort, the better no doubt he will hold what he attains; but if we want him to arrive at the fact that a certain king died of a surfeit of peaches and new ale, we had better tell him and have done with it. No questions bearing on the diagnosis of indigestion and the weaknesses of kings will help either our boy or us.

The Preparation process will have stirred up expectation, quickened pertinent ideas, put out points of attraction for other similar ideas. The presentation now performed by the teacher lays the new ideas within reach of the old ones in one of the three ways enumerated; either by directing observation, or stimulating inference, or by straightforward telling.

If we have been successful in our presentation of new matter, we have not just filled up a gap in knowledge, we have not merely finished off the old ideas existing in our pupils' minds by attaching more ideas; we have also given the old ideas a new life, transformed and enlarged them; not satisfied them, but made them readier to appropriate and assimilate more of the same kind of food. The real process, then, is one of comparison. The regenerated and enlarged ideas begin to sort out from the mental *débris* of experience, from consciousness, other ideas that are like themselves, separating them from the unlike. They perform a kind of analysis, succeeded by an act of synthesis. Contrast or Comparison marks things out from one another, decomposes them, in order to recompose them. All analysis in a healthy mind is followed by synthesis. The formal step called Comparison therefore "sets up parallels". The teacher of little children makes her pupils compare the apple with other common fruits; the schoolboy of twelve recalls other sovereigns who have died from famous indigestion; the scholar of eighteen who is reading the history of Roman land legislation compares the Hebrew year of jubilee with the less regular efforts of the Roman *plebs* and others to readjust their burdens.

Comparison

Generalisation

The step next laid down as usual and necessary is the formulation of a general fact or law; this is the stage of Generalisation, which follows naturally upon the process of Association, or Comparison, or setting up of parallels—*seu quocunque alio nomine*—that has already taken place. The pitfall that here commonly waits for the unwary teacher is the favourite fallacy of the illogical, generalisation on too few particulars. It happens most frequently in what are called "science" lessons. The "scientist" shows that a bar of iron expands under heat or that steam takes up more space than water; he then triumphantly requires his class to infer that all bodies expand under heat. It is clear that even if the law as stated were true, the one *unanalysed* illustration is not, taken alone, sufficient to establish it. Nevertheless, teachers, and especially teachers of experimental "science," often seem to be doing their best in this operation to cultivate our natural depravity, our tendency to jump to conclusions on insufficient and unchecked evidence, the fount and origin of as many human woes as indulgence in strong drink; for indeed it is a kind of dissipation. If the teacher can so contrive his class procedure as to show his pupils how the laws of logic require that conclusions should be scrutinised and checked, his methods are sound and profitable. If he does not follow this course, his teaching may be thoroughly bad training, and can be expected to result *neither in the strengthening of the reasoning* powers nor in "scientific" discovery.

Obviously, the generalisations made by pupils of different ages will differ. Suppose for instance the Armada is a subject dealt with in three stages of school-life. The boy of eight or nine may be made to understand that a number of quick little sailing ships are handier in a fight than a number of lumbering galleons. The boy of twelve or thirteen may be led to recognise as a general fact that free institutions knit together against invasion people of all creeds and all classes. The older students will, with other things, see deeper into the political situation and the bearing of social and political institutions on the conflict. We must note, of course, that as we ascend in the scale, the power of generalisation necessarily becomes greater, and that we do not expect the small boy to group his parallels into laws as freely as the scholar of riper years; he has fewer facts and is less capable of seeing reason. Many lessons will stop with Presentation.

We must be on our guard, too, lest in the endeavour to secure a generalisation we make no distinction between the exacter sciences (such as mathematics in a high degree and grammar in a lower degree) and those sciences in which generalisations are less easily obtained because of the lower certainty of the subject-matter, as history, for instance, and geography, and even the experimental sciences, each in its proper degree.

In mathematics, which deals with types or abstractions throughout, generalisations may be irrefutable; in the experimental sciences and sciences which can by their nature determine *opinion* only without justifying conviction or certitude, we must be content with something less. Therefore not only will the kind of generalisation made by our pupils differ at different stages of school-life, but the generalising process will always be safer and more legitimate in some subjects than in others. We may allow generalisations to be made freely in mathematics; in the experimental sciences they must be tentative and hedged round with qualifications; while in history and geography it will often be best to be content with an orderly and clear apprehension of particulars.

Application of generalisation to new particulars

The philosophers lay it down next that we should apply our generalisations, gained as we have described, to some common or current matter. We are to make our pupils use their generalisation with a new fact or facts, as a premiss in deducing new results. If we recur to our Armada illustration, the small boy might fairly be allowed to suggest that a big modern battleship may be at the mercy of handier boats of smaller size—given of course additional conditions, which must be added to make the reasoning safe. The boy of twelve may make immediate application of his generalisation to the effect of the free institutions of his native land in cultivating a sober national self-reliance. And so forth. This step in its turn must be taken with very great precaution in order to secure that the new particular can properly be brought under the generalisation which is used for its elucidation. A correct minor premiss is not less important than a correct major.

Let us see now to what extent there is justification for the criticisms directed against this formula.

Objections to the Herbartians' type

First of all it *is* a formula, and therefore in the complexity of things must be liable to large discounting. Most good lessons will teach more, and many good lessons will teach less, than is implied in its strict use. The incidental teaching in a lesson is often of greater value than the generalisation in which it accomplishes itself, and "application" may have to stand over for a fit opportunity.

But this criticism is not more fatal to the general formula of teaching than it is to other useful formulas. For instance "Things that are equal to the same thing are equal to one another" is true only, so to speak, *in vacuo;* for no one thing can be conceivably equal to another thing. Still, the formula is very useful; things that tend to be equal to the same thing tend also to be equal to one another; and by believing this we get very valuable results.

We come near to the exact use of the Herbartian type in lessons to little children; and that is one of the reasons why the best training for teachers is training that begins with teaching the very young, for the mental operations of children are simpler, more primitive, less veiled by reserve, than those of older folk. "Object lessons" in particular lend themselves to the standard treatment, the several steps being clearer and the side issues fewer than in most other kinds of lesson.

It is objected next that some lessons scarcely approach the type; that the various processes already here enumerated cannot be applied in lessons which are, so to speak, carried forward over a long period—such as, for instance, the study of a Greek play. But remember, first of all, that it is already admitted that the steps may be merely implicit. We do not always State our Aim, Prepare, Present new Matter, and so forth, formally; we pick up the thread of our work where we dropped it. The class may know well what is our general aim without being told, and in the same way other steps may be merely implicit, or temporarily suppressed, or attenuated. But note, in the second place, that though the whole of a single hour's lesson may not fall into the standard mould, yet *every item that we teach*, every difficulty that we tackle, actually does. If a good teacher meets a crabbed passage, how does he proceed? He first, being a good teacher, gives his class clearly to understand what the difficulty is. If he were a bad teacher (and most of us have met such monsters) he would leave the class uncertain about the point to which he would have attention specially directed; this is the characteristic fault of bad lecturers, and it is commoner in the secondary grade and university teaching than in the primary grade. Having stated his aim, the good teacher prepares the ground by calling for his pupils' voluntary contributions. This is where we note the most conspicuous defect of the primary teacher. He has almost lost the tradition which required boys and girls to "get up" something by themselves; not only therefore will he not invite a voluntary contribution, but—ah! how much worse!—he will only ask a question of which he foresees, or thinks he foresees, the answer. This is indeed one of the several Socrates represented to us by Plato and Xenophon, but it is the worst kind of Socrates.

The fault of Mangnall's Questions was not that they gave children all sorts of information to learn by heart—which itself might be very useful—but that they actually provided beforehand against the pupil's discursiveness or expatiation; stopped his earth; circumvented him. Yet Mangnall's Questions had at least the merit of throwing the work on to the pupil and not the teacher; for, as Charles Kingsley and Miss Soulsby say, children once used to learn a lesson and say it to the teacher, whereas now-a-days the teacher learns the lesson and says it to the children.

In tackling our difficult passage, then, we follow the type in making our call first on the class, and when we have led our boys by encouragement and a little questioning to produce all they can, we proceed to give our version, "present" new matter. After this, we "compare" other similar passages, lead to the general rule, and, as soon as we have the chance, make the class apply the newly learnt rule to a new instance.

The construing lesson

Proceeding thus, the old construing lesson has been of incalculable value as mental training; and it still holds its place against every other school exercise, precisely because it so naturally approaches the standard which was not propounded till the formal steps were set forth by the Herbartians. If what is called "science" teaching would only take a leaf from the classical book and model itself on the ordinarily good construing lesson, it would do much more to deserve the supreme place in the curriculum which some enthusiasts claim for it. The whole sum of profitable instruction is to teach people not a chaos of facts, but how to discover and apply pertinent considerations in particular problems. This is exactly what good instruction on the Herbartian model does for us, and there is no better exercise for it than the critical study of literature.

Notes of Lessons

"Notes of Lessons" should be frequently drawn up by students and occasionally by all young teachers, and should be submitted to the criticism of an experienced person. The less "stuff" they contain, the better. The traditional division into Matter and Method is generally unsatisfactory because the two things are hardly separable, and what appears as "method" in most Notes of Lessons is usually not method but procedure, telling not why a particular procedure is adopted, but the machinery that is going to be used. Wherever the subject permits, the Herbartian arrangement is far better, the least of its merits being that it forces the student to concentration. Certain lessons—discursive literature lessons or "construes"—will not easily lend themselves as wholes to this kind of formulation, but it must never be forgotten that the formula is applicable to the *parts*, if not the whole, of every piece of real teaching.

Wherever possible, the notes of a lesson should indicate the next, or any succeeding step, which the pupils may be expected to take the more easily because this lesson has been learnt. It is not to be supposed that any lesson is entirely complete in itself. The process of Application, properly used, should make the scholar feel that the lesson opens up a new field, or new fields, to him. The best closing formula for a lesson would be "Next time we shall be able to discuss . . . See what you can make of it for yourselves." This is what we mean when we set home-lessons to be heard at school, and it is therefore of immense importance that home-lessons should *break new ground*, in ever so humble a way, and with careful regard to age, health, and status, and not be *merely* "exercises" on work done in school. The mental attitude which we should desire our teaching to produce in our pupils is expectancy. Everything that deadens this is bad teaching. If we can get our boys and girls to leave the class-room wishing to know a little more, be sure the process of digestion will be healthy. If they are merely satisfied with their meal, the result may be good or bad; if they are surfeited, it must be disastrous.

Series in teaching is more important than the single lesson

The young and enthusiastic teacher whose training has perhaps led him to attach undue importance to the machinery of the single lesson will do well to remember that the series of lessons, his plan of teaching a big subject as a whole, is of much more consequence than the elaboration of each one of thirty lessons. He must think of every subject of the curriculum not as a body of facts to be acquired but as a mental habit or attitude to be cultivated. By all means let the items be carefully considered, each in its place; but it matters less if there are gaps here and there than if the general syllabus and general treatment should be pedantic or inadequate. In these days of brand-new syllabuses and curricula we do well to watch this point with great solicitude.

Misuse of the "Socratic" method

We may then fairly doubt whether the "Socratic" method, as commonly understood and practised, has done our teaching much real good; and it is to be hoped that it will not devastate secondary teaching through the enthusiastic misguidance of imperfectly trained teachers. Questioning, in the hands of Socrates, to judge at least from Plato, was often an "eristic," a merely controversial device, rather than a means of teaching. It was indeed, a kind of "sophistry" in the modern sense, and it could quite truly make the worse cause appear to be the better one. Socrates' questions not unfrequently bemused and confused his victims; and then, when the master had fairly or unfairly—he did not mind which—proved them wrong, or at all events had intellectually stupefied them, he dropped his catechising and made long speeches; that is, he lectured, lectured if Plato records aright, gloriously. But this cannot be said to be a good working model for us. Socrates did not usually teach a class of boys. We must not discourage our young pupils by a patter of questions, having confutation as their result; and little profit is to be got from mere lecturing. We have to induce boys and girls to work; set them to master things, to bring us the proof and to rejoice in their own articulateness, not in ours. We must not silence them either by perpetually talking ourselves or by prescribing the exact form to be taken by their thoughts made articulate. That is, we must be moderate in our use of questioning as a discipline in instruction. We must encourage them to construct for themselves. The *excessive* use of questioning is a worship of mere machinery.

Excessive questioning reverses the natural procedure and deadens initiative

After all, it should be remembered that in the common order of nature it is the person needing instruction who usually asks questions, not the person giving it. Why should the nature of things be topsy-turvy in the schoolroom? It is not so at home. Why should the questioner in school be almost always the teacher instead of the learner? Our business is to make our scholars feel the lack of information, desire to ask questions; to encourage them to find out what they can for themselves, and to be keen to hear what we have to add to their stock. *They* must, in fact, question *us*; or, at all events, stand in the attitude of those who want to know.

If our pupils get into the habit of waiting for a question before they are moved to stir up their existing stock of applicable ideas, *they will respond ultimately to no other stimulus;* and they will even be unable, or at least disinclined, to produce an answer unless the question to which they are accustomed comes in the form which they expect. "They never move but by the wind of other men's breath, and have no oars of their own to steer withal," if we may quote Cowley. That is, the knowledge is never truly theirs; it is still the property of their teacher, who is the holder of the key that fits the lock; who rubs the lamp in the prescribed way to make the genie appear; who knows that only a penny, and not a shilling, will fit the slot and disengage the packet of chocolate. A question, rightly put, contains, as we know, more than half the answer, and it is not good teaching to leave so much of the permanent initiative with the teacher. The too convincing proof of this lies in the fact that, on the whole, the pupil of the primary school is generally inarticulate except when just the right sort of question is put to him. His teacher can always "bring out" his knowledge, "elicit" it quite honestly, when the most genial stranger may fail. The boy's ideas are only half alive; they put out tentacles, so to speak, in one direction only.

He is in the condition of certain of the sages of Laputa, not indeed by reason of intense speculation, but because his ideas sleep until some familiar sprite stirs them from outside with a magic wand. People in his mental condition, as Lemuel Gulliver describes them, "can neither speak nor attend to the discourses of others without being roused by some external taction upon the organs of speech and hearing; for which reason those persons who are able to afford it always keep a flapper in their family . . . and the business of this officer is . . . gently to strike with his bladder the mouth of him who is to speak and the right ear of him or them to whom the speaker addresses himself".

With us, it is the teacher who too often has to act as the flapper.

We tend to forget that all the elaborate rules about proper questioning are merely ancillary to the first of all teaching rules, the rule that calls upon us by every available means to induce pupils to think clearly and consecutively for themselves. For this purpose, the elliptical question, the question answered in one word, the question that evokes a plain Yes or No, may all be occasionally used with point and effect. But questioning is not in itself teaching; it is a device, an instrument, to be used with proper parsimony, and serviceable only in order to stimulate the pupil to independent effort.

The remedy: call for consecutive recapitulation

We shall not fall into the error of excessive questioning if we remember that our chief business is to give the pupil the power and habit of reconstituting his knowledge for himself, not as fragments but as wholes. Let us by all means ask necessary questions, particularly in the stage in which we are preparing the ground for new matter; but it is far more important that we should call frequently for *a concatenated account of the whole of a point or lesson*, with only such rare prompting as may be necessary to ensure that the recapitulator leaves no serious gap. With younger pupils the process must, of course, be chiefly oral; one or more should perform this summary exercise at various stages and at the end of every lesson. As they get older, pupils can be more frequently called upon to make their summary in writing; but the oral recapitulation is always exceedingly valuable. The work is then fresh in the minds of the audience, criticism is alert, and confidence is strengthened. Moreover, it is no small gain to cultivate the habit of thinking aloud; for most of us cease to think connectedly as soon as we begin to speak; we say what we *have thought*, not what we *are thinking;* we may chatter in the pseudo-Socratic manner taught in the schools, but we do not converse.

Let us then make our boys and girls stand up and give their own summary, perhaps after a few minutes for thinking it over, at the end of every lesson or every separate part thereof that lends itself to such treatment —history, geography, "science," divinity, mathematics, even philology. Clearly, as our scholars advance in age, the desire which we have encouraged in them to ask questions in class will be assuaged by a larger stock of information and, above all, by a knowledge of other quarters from which information is obtainable. The practice of questioning becomes then chiefly a means by which the teacher finds out what his pupil knows, not so much a means of external stimulus. The youth of eighteen or nineteen may be expected to listen to lecturing which would quite properly send younger folk to sleep.

The "complete sentence" no remedy

The "Socratic" method has trailed after it another teaching device of more than doubtful value, and that is the insistence on the "complete sentence" in answer to all questions. It was discovered that submission to the plague of excessive questioning made the children less articulate and less constructive. It was noticed how incapable they seemed to be not merely of giving a continuous account of anything, but also of speaking otherwise than by hints and in jerks, as who should move only in answer to string-pulling. They are therefore sometimes expected to acquire *copia verborum* by being made to throw all their answers into full categorical form. But this is rather hindrance than help. If to my question "What have I in my hand?" a child answers "You have an apple in your hand," or "It is an apple," instead of "An apple" (which is what most sane people would say), he has merely expressed at length what was always implicit in the briefer reply. I have made the child evolve no new ideas, reach out to no new knowledge. I have succeeded only in putting a skid or brake on his wheel, making his ratiocination less nimble by cumbering it with machinery. But if I call on him to fix together several steps of teaching, he makes not one sentence but many, and constructs a ladder on which he reaches something quite new. To be sure, there is an appropriate and very useful place for the "complete sentence" in teaching, and that is in the "composition" or "rhetoric" lesson, which calls for the construction of genuine propositions logically combined and resulting in new knowledge. Small boys and girls must, at seven or eight, be taught how to make sentences, which is properly done when the teacher shows them on the black-board how they can summarise a lesson in several sentences all connected. But perpetual insistence on the use of the complete single sentence in answering, even in the infant stage, results, if in no other harm, in the production of unnecessary slowness and "priggishness". The device is not even "Socratic"; Socrates was quite satisfied with one word, if it was the word that he wanted; satisfied even with an elliptical answer, which may be very effective. The *quick* play of question and answer is often most valuable just because of its suppression of all but the words necessary to from the skeleton of the working thoughts. There is no reason, let us say again, why the practices of every-day life should be turned topsy-turvy in the school. Questioning and answering in school will be most profitable according as they approach most nearly the form that intelligent conversation takes elsewhere; and it is certain that the "complete sentence" is not the invariable form even of the best-regulated conversation amongst the most intelligent teachers.

Shakespeare knew the value of the incomplete sentence. Its very incompleteness is often its very strength.

K. JOHN. *He is a very serpent in my way;*
And wheresoe'er this foot of mine doth tread
He lies before me; dost thou understand me?
Thou art his keeper.

HUBERT. *And I'll keep him so,*
That he shall not offend your majesty.

K. JOHN. *Death.*

HUBERT. *My Lord?*

K. JOHN. *A grave.*

HUBERT. *He shall not live.*

Other devices for maintaining interest

There are many devices by which we may maintain interest during the process of teaching, though the main source of interest must always be the judicious use of a rational plan. But all teachers, and especially teachers of young people, find it necessary, for the maintenance of willing interest, to "illustrate" what might be, at least at first, or to the more listless members of a class, arid and dull. However engaging our subject may be in itself, the constraint of class-teaching is constraint after all, and the teacher must help his class to submit to constraint cheerfully. He has therefore to supplement the gifts which he owes to nature, the clear and pleasant voice, good physique, and the rest, by learning to interpret the signs of mental fatigue and unrest; by cultivating the power of clear consecutive narrative and ready speech; by using effectually graphic and "object" illustrations; by such means of stimulus as marks and place-taking.

The effects of the personality of the teacher are dealt with elsewhere, but a word may be said about "illustrations" and other means of artificial stimulus which all can command.

"Illustrations"

"Illustrations" in the primary school tend to become a kind of fetich. In the desire to obey the precept "things before words," the teacher has often fallen into the error of acting as if "things" could be a substitute for words, as if ideas were naught. Accordingly, elaborate and complicated pictures are prepared beforehand and paraded rapidly before the eyes of the class in the hope that all the details over which the teacher or engraver has spent so much time may somehow get under the skin of the listless boy that gapes in the back row. Or an operation which is perfectly simple in three dimensions is obscured by being represented on the black-board in two. The right rule in such cases is surely this—that graphic illustration should be used to help out the mechanical or verbal representation, not to complicate it. If an operation in needlework is understood when demonstrated with needle and cotton and working material, a diagram may darken counsel. The making of a beef-steak pie needs no diagram. But if we wish to isolate parts of a complicated process, as for instance in chemical demonstrations, the black-board, with its sectional drawing of retorts and test tubes and wires and so on, and its indication of physical process, may be very useful. It is very doubtful, on the other hand, whether the graphic representation of a metaphor illustrating a series of concrete facts, such as that so ingeniously constructed by Mr. Somervell in *Teaching and Organisation*, may not lead to most serious confusion of metaphor or illustration with explanation, which is one of the most fruitful causes of error in every branch of knowledge, and notably in history and theology and philosophy. So too, in botany teaching, the enlarged sketch gives definiteness and permanence to what under magnifying glass or microscope is perceived with difficulty. It may be generally said that for teaching purposes blackboard illustration is more effective in proportion as it is rapid, rough, and incidental. When a class sees a sketch grow rapidly under the teacher's hand, *it believes in it;* a sketch made out of sight beforehand carries little conviction. Such drawing is a help to abstraction ; it notes down the pertinent things and eliminates what does not matter. It is a kind of shorthand.

Teachers sometimes load themselves with items or "objects" to show to a class, and think a lesson is good in proportion to the number of "illustrations" so produced. And yet it is not the number of things but rather their pertinence to a clear mental result that makes such devices useful. Not only must the illustrations used in teaching be pertinent; they must also not be over-elaborate when they are pertinent. The simple black-board drawing of Vergil's plough made before the class, the rough sand or clay model constructed under similar conditions, are far superior to many objects which have cost their makers hours of labour.

The perpetual parading of things before the eyes of learners is the misuse of a very salutary practice. Lemuel Gulliver saw the like in Laputa.

"Since words are only names for things, it would be more convenient for all men to carry about them such things as were necessary to express a particular business they are to discourse on. . . . Many of the most learned and wise adhere to the new scheme of expressing themselves by things, which has only this inconvenience attending it, that if a man's business be very great and of various kinds, he must be obliged in proportion to carry a greater bundle of things upon his back. . . . I have often beheld two of these sages almost sinking under the weight of their packs, who, when they met in the street, would lay down their loads, open their packs, and hold conversation for an hour together; then put up their implements, help each other to resume their burdens, and take their leave."

There are people, again, whose minds are mere storehouses of observations or "facts". But there is no great advantage to be secured by photographing on the brain all that we see or hear; this may lead to mere dissipation of attention. We must try to remember the significant and pertinent things. Like Themistocles when Simonides offered to teach him the art of remembering, we may well say that we would rather learn the art of forgetting; for like Themistocles, we often forget what we should remember, and remember what we should forget.

Marking and Place-taking

In marking and place-taking, the main point that should be borne in mind is that we must be careful to conserve the self-respect of a boy who is habitually low in a form. We cannot always give honest effort its due. But, in allotting marks, we may at least allow an exercise that shows a minimum number of mistakes to receive full marks; by this device relative excellence need not seem almost unattainable to the ordinary boy who puts his best foot forward, nor the brilliant "freak" be corrupted by having no rival near his throne. Place-taking, a very useful practice indeed, has almost entirely disappeared from the primary schools, no doubt in the main because of the large classes that are common and the break in *apparent* orderliness which the practice involves. The instinct that retains it in the lower forms of the secondary school is a sound one. It stimulates competitive effort with few risks; it keeps interest alive; it cultivates quick-wittedness; it gives the boys a sense that they are sharing in the game which is otherwise enjoyed by the master alone. With such precautions as those described by Canon Lyttelton in *Teaching and Organisation*, it is a fine and safe instrument of class-discipline.

Examinations

It is a matter for regret that a writer on the practice of education as it is organised cannot satisfactorily dispose of his subject without feeling that his views and recommendations must be qualified by considerations arising from the influence of public examinations. In the course of our day's work we must repeatedly deplore that what we know to be the truly edifying and educative procedure cannot be adopted for the simple reason that the indifferent performance of our pupils in public examinations is too serious a professional disaster for us to face.

It cannot be too firmly maintained that no examination is really satisfactory as a test of the quality of instruction given which does not provide for the participation of the teacher, the only person who is conversant with the needs and the intellectual condition of his pupil. An ideal examination would combine the internal or domestic with the external or foreign examiner. There are many ways in which this might be effected. For instance, in every examination the teacher might propound (say) a dozen questions from which the external examiner would be required to choose (say) six, and to these add six of his own. As it is, we may have examiners who have never taught at all, who may even never have been themselves taught in form. In the universities a reasonable representation of recent teaching is obtained by the inclusion of examiners who have themselves recently taught, but not taught the candidates under present examination. We suffer, again, under the almost entire absence of oral examination, which would in many cases enable a candidate who had been either ill-treated or unfairly favoured by fortune to get his deserts. Moreover, our examinations are excessively minute, and, as a consequence, tend to be directed excessively to incidental and collateral knowledge rather than to the things that greatly matter; to exceptions, to rare and inconsiderable items, to novelties, knotty points, and so forth.

Of course the skilful examiner is careful to keep the balance true and to try particularly to find out how far candidates have mastered the various parts of their subjects in proper proportion as well as their outlying matter; but every one knows that many examiners are not experts in teaching, much less in education; and that the youngest and least experienced of scholars are often set to examine youths and young children, who are most seriously injured by making a wrong start.

The teacher can do a great deal to mitigate the effect of these evils by distinguishing carefully between examinations private and public. We examine our pupils in private for two purposes: first, to ascertain the effect of our own work, to check ourselves no less than them;

secondly, to co-ordinate, concentrate, and confirm their knowledge. To this end oral examination is generally more effectual than paper work, the true type of examination being, as Professor Laurie says, intelligent conversation. Paper work, however, is most serviceable in securing greater deliberateness of thought and exactness of expression; and it is the more necessary as we advance in the school course and deal with subjects that make greater calls on reflection and cover a larger area of details from which the pupil has to select the material of his answer or theme. Bearing in mind the purpose of private examination, we can use it effectually both to build up mind and character and to correct some of the inevitable perversion of perspective which results from unscientific examination by external authorities. We must be careful so to conduct our inquisition that the pupil may draw help from as large an area as possible of the work done with the teacher; and that it should also be so contrived as to cover at least a little ground *not* traversed in teaching. By these precautions we give due weight to memory and capacity for arrangement, and at the same time test the fertilising power of our work. On such occasions, therefore, we very properly set unusual problems in arithmetic, riders in geometry, general questions in history, and in every way possible encourage work outside the strictly detailed syllabus.

Public examinations

Public examinations have been devised in order to establish a uniform and comprehensible standard of attainment and so to distribute public prizes and diplomas, and even certificates of fitness for advancing stages of instruction. "A life that is not submitted to examination," says Plato in the *Apologia*, "is not a life for a man to live." Now these public examinations are conducted by impartial persons; but however impartial such external authorities may be, they necessarily find it easier to arrive at results by setting traps to detect ignorance of detail than by laboriously measuring their candidates' actual attainments and relative mastery of points of more general and therefore vital significance. They tend therefore to ask for *recondite* details, and so they force upon the candidate an unwarrantably concentrated devotion to exceptions and irregularities.

One marked indication of this finicking pursuit of the unusual is the compendious and crowded character of examination papers set by English authorities as compared with others. Too much importance is attached to a knowledge of details and particularly recondite details worked out by other people, and too little encouragement is given to general mastery of a subject and closer investigation on original lines. Hence a multitude of small, unoriginal text books minutely annotated; hence "cramming" and "crammers"; hence excessive uniformity of method; hence a general subordination of educational to inquisitional purposes. Against these and the like influences the over-aided teacher and over-aided pupil must struggle as best they can.

For reference:—A. Sidgwick and G. E. Buckle in *Teaching and Organisation*, and other contributors *passim*. H. Courthope Bowen's pamphlets—*The Training of the Constructive Imagination* and *The Training of Judgment and Reasoning*, and Froebel's *Education of Man*. De Garmo's *Herbart*. Principal Adams's *The Herbartian Psychology Applied to Education*. Welton's *Logical Bases of Education*. Herbart's *A Text-book of Psychology* (trans. pub. New York). Miss Mulliner's *Application of Psychology to Education* (*Herbart*). Sully's *Psychology for Teachers*. Dexter and Garlick's *Psychology in the Schoolroom*. Prof. James's *Principles of Psychology* (briefer *Text Book*). Prof. Lloyd Morgan's *Psychology for Teachers*. Compayré's *Intellectual and Moral Development*. Fitch's *Lectures* (see Questioning, etc.). Butler's *Psychologic Foundations of Education*. Laurie's *Institutes of Education*. Adamson's *Teacher's Logic*. Welton's *Logic*. Thring's *Theory and Practice of Teaching*. Abbott's *Home-teaching*. Parker's *Talks on Pedagogics*.

CHAPTER II

THE DISCIPLINE OF CHARACTER

Moral action, it is never to be forgotten, is immersed in circumstances.
—MacCunn in *The Making of Character.*

Discipline is always of character

ALTHOUGH custom permits us to divide discipline for the purposes of discussion into two parts, it is in truth one and the same for training both mental and moral; without it, we cannot exercise guidance or evoke effort of any sort. Discipline, therefore, in the formation of character, extends its sphere of activity even into the setting forth of a lesson and into all the details of instruction. In teaching well or ill we encourage the formation of good habits or we check them; we make the formation of bad habits more difficult or we make them inevitable. And by habits we must mean habits both moral and intellectual, for the two are inextricably associated. But we find it convenient for practical purposes to isolate the process of evoking or communicating knowledge, because knowledge consists largely in the apprehension of facts, and such apprehension is a part only, though an indispensable part, of the building up of a sound mind. Knowledge is a unity, it is, as an object, the same for all, though different minds may stand in a more or less perfect relation to it. Morality or character is a tendency or will to choose a right course of conduct, and unless we had a system of casuistry we could not set forth exactly the outside or objective conditions of all right action.

The key-note of the situation is the necessity of recognising that for man education is never completed. Whatever man is destined to be, we know perfectly well that he has never reached the highest point attainable. All his achievements are but an earnest of what he *can* be. To profane history the perfect man is not known; the divine standard has never been reached by mere man in any form of religion which has set up an ideal. Until, therefore, this unattainable ideal is reached, we must press forward; it is a law of our being. Other creatures may be developed and trained to apparent perfection. We may breed and train our domestic animals until we would wish them to be no better; and we have no evidence that they have any consciousness of completeness or incompleteness. But man cannot escape his ideal; he must always be growing. We know what purpose is attained by the "virtue" of a horse, as Plato might say, but the chief thing that we know about human "virtue" is that it changes in detailed application with every new combination of circumstances.

The education of a man is never completed

If this is the case, then the educator must at once widen and narrow his task. He must communicate to his pupil an impulse which opens up endless possibilities of progress, to be handed on from himself to another generation, perhaps; he must give him the power of "going on". And he must be careful not to overwhelm his pupil and discourage him by giving him at successive stages too great a burden for each stage to carry. To secure the first end, he must make his pupil, as a result of discipline, as nearly as possible independent of circumstances and of external guidance, by calling into life the

The educator must open up a wide prospect, but not give his pupil too much to achieve in successive stages

internal motives that will always drive him forward. He must leave none of the functions of intelligence and character dormant. But to secure the second end, he must graduate the tasks which he sets so that the sense of power may grow continuously, the pupil freely working out his own salvation, conquering each time a little world, though beyond it lies immensity.

The pupil's place in his own education

Two views have been held as to the potentiality of teaching. Some people have said that the teacher must let the pupil altogether alone—that "Nature" herself will be sufficient to develop him and shield him from harm. Others have said that the one thing needed to secure the perfection of men is teaching. It will not be surprising if we find that the truth lies between these extremes, though truth is at least touched somewhere by each. The teacher or educator may, indeed, interfere too much or unwisely, and he may interfere too little.

The teacher's place is in fact determined by his pupil's. The pupil must be called upon to take a share, the chief share, in the task. Nothing else will do.

The clean sheet of paper

There are two opposite errors that seem to have prevented this fact from being properly seen and interpreted. First of all there has been the belief that, in dealing with a pupil, you have from the first nothing to do but to write on a clean sheet of paper whatever you wish to be there. The philosophers who held this view regarded all knowledge as proceeding solely from bodily sensations, and all processes of reasoning as being modifications and combinations of sensations; in which case we have nothing to do but to reason with our pupil from the first, because sensations *are* reasons and reasoning is nothing but appeal to sensations.

Here we see there is little room for independence on the part of the pupil; the thing most important is what is contributed by the teacher. And the pupil being regarded prematurely as capable of assimilating ideas which we know to be beyond his intellectual digestion, we have a huge excess of memory work, if any result at all, in the hope that "knowledge" thus acquired will be assimilated by some mysterious process of reason. On the other hand, again, successive appeals to the senses directly, giving little time for quiet mental discrimination, tend to destroy the power of attention, for attention is the power of ignoring or suppressing many things in favour of a few or one. The persistent cultivation of what is called "observation" to the exclusion of reflection may end not only in bird-wittedness but in a positive weakening of will-power. In the formation of character this leads to *cant*, which is the tendency to imitate by rote, and we can have canting action as well as canting speech, neither being of necessity consciously insincere.

Innate ideas

The second serious hindrance to a proper conception of the pupil as co-operator in his own education has been the belief in the origin of all knowledge in innate ideas. This may be held in two different forms. It may be thought that each new human being is born with his full complement of innate characteristics and ideas, or it may be thought that all the characteristics and ideas of each man are merely the resultant general effect on him of those who have lived before him, his ancestors and predecessors in the world.

Either of these views, if held without considerable reservations, may lead us to doubt all individual responsibility; and indeed contemporary legislation seems sometimes to have been conceived in this spirit. But the psychologist and the educator alike must ignore them, and for practical purposes assume that though they may modify our practice and make us careful, they are not to dictate the character of our efforts in school and the field of discipline generally. The influence of heredity is, no doubt, considerable; but everything tends to confirm the belief, implicit in all educational effort, that environment is much more powerful.

The irrepressible life in children must be used as the chief motive-power in education

We must strike a balance. We must not leave children to grow up as savages, by cultivating their senses alone. We must not even leave them to the education of their senses together with the mere coercive influence of social institutions, for this would, at best produce a spiritless uniformity, and at worst might leave criminals on our hands. We must call other powers into play, and educate. But what powers? The powers that really lie readiest to our hand. It is our chief business to use for the child's own good the life and irrepressible activity of life that are in him, to give him the knowledge that he can develop himself, and the will to do it even when other persons have ceased to interest themselves in his "education". We have, in fact, to set up the right habits and the tendency to form right habits, that is, to do good habitually. The effect of a good habit is that we can depend on it for suggesting the right act at the right time. It is therefore a form of orderliness; that is, impulses in well-disciplined people are so well ordered or arranged that it is easier to do right than wrong.

The first need is orderliness

The first necessity then for the creation of good habits is orderliness, either in an individual or in a class. When this orderliness is produced purposely we call it discipline, which is the manipulation of external agencies in such a way as to make the formation of good habits easy and of bad habits difficult. Speaking roughly, we sometimes talk about the "discipline" of circumstances, the "discipline" of events; but this is to ascribe to outer nature a self-consciousness and intention which it is not proved to possess. The pressure of circumstances may set up good habits, but the *adjustment* in such cases, the effort to profit by them, originates in the person affected; he is moved by circumstances to reflect, and thence to discipline himself.

Good and bad habits grow by what they feed on

Good habits may grow by use, and bad habits are best eradicated by lack of exercise. The teacher must therefore provide opportunity for the one sort, encouraging them, stimulating them; he must give no openings for the other sort, and, if they appear, nip them and starve them. Habit is, as Professor James says, the great conservative force of human nature and human society. Instincts by themselves give little guarantee of personal or social safety; for instincts are blind, they are that in us which makes us act to produce an effect without meaning to do so, on impulse. They are blind reactions set up by the needs of our physical framework. They take no account of consequences. Habit, on the other hand, though it ultimately tends to become automatic, is set up in the first instance by intention, by the exercise of will. If we set up good habits, we prosper; we "fund and capitalise our acquisitions and live at ease on the interest of the fund," in the words of the writer last quoted. We will to do a good thing in the first instance, and will again and again until the pain and difficulty of the first effort pass away, and we "live on the interest of the fund" so amassed.

Discipline is the external cultivation of habit

Discipline then, from the teacher's point of view, is neither more nor less than the steady endeavour to cultivate in his pupils the habit of willing well by providing the right atmosphere and the right food. Virtue and vice themselves are habits, though they imply also a power of seizing new circumstances not implied in mechanical habit. Let us see, now, what the teacher can do to check the beginnings of evil and encourage the beginnings of good; to maintain the good habit and to starve the evil; to give a pupil the habit of controlling the acts that make habit.

Habits are closely dependent on physical conditions

He must first of all bear in mind that habits have physical foundations or at least connexions. A thing is done more easily a second time because it has been done once. Physiologists assure us that the nervous system has undergone a corresponding modification. We must not therefore wonder or be discouraged if the effort to break a bad trick in an individual, or even more, in a class, seems to be continually baffled. Mere physical drill, as teachers know, may here be found of great service, for it accustoms a class not only to perform the motions immediately prescribed, but also to take up with alacrity the sudden word of command at other times. A teacher can indeed do much to make the physical foundations strong. To set up a respect for cleanliness and brightness, we should surround our pupils with clean and beautiful things; what hope would there be of stimulating a lively mental picture of clean and lovely things in a dirty schoolroom, ill-kept, disorderly? It would be, strictly speaking, physically impossible. This is one of the ways—a physical way—by which the teacher creates an atmosphere favourable to discipline. He manipulates the circumstances under his control in such a way as to make it easier to act well than to act ill. We must therefore do our best to deliver our younger and more impressionable pupils from capricious or irrational temptation, by surrounding them with good order and a clean atmosphere.

The place of temptation

When the habit of self-control has been set up in small things, then, and not till then, the temptation, providing it is not too strong, may be permitted in order that the will may be strengthened to resist by exercise. We must not, of course, throw inordinate temptation in the way of our class. We cure small habits of deceit and the habit of thinking little of such things before we leave our class alone when they are answering examination papers. This is made necessary by the physical, some would even say the "mechanical," foundations of habit. The teacher must next be vigilant to permit no backsliding. If we are endeavouring to set up a good habit, it is clear that we must keep the road as clear as possible from the obstructions of a sudden check. If we have given orders that a certain thing is to be done at a certain time in a certain way, then, supposing that we have a general end in view, we find it all the more difficult to compass it if we allow a lapse. The teacher must see that both his pupils and himself make a good start. Many of the difficulties in the way of setting up good habits in an individual pupil or a class arise from an implicit disbelief in the possibility of change from the bad habits. It may not, for instance, be possible for a person who has no habits of regular industry to know that such habits are cultivable and ultimately pleasant. It is clearly then the teacher's business to watch for or to make an opportunity to show

Backsliding.

The proof of the pupil's power to himself the pupil his own power over himself. A sense of the exercise of power is itself pleasant and carries within itself a guarantee of repetition. The consciousness of the power to make, to produce an independent result, is the most powerful of all educating influences. The cultivation of the habit of obedience owes much to this principle. No day passes in school without providing for some, probably for most, pupils an opportunity to do something which in its superficial aspect is difficult or disagreeable. Every fresh intellectual effort is, in its measure, painful. The schoolmaster does for his pupil what Professor James advises every grown man and woman should do for themselves, he "keeps the faculty of effort alive by a little (gratuitous) exercise every day". Habit may otherwise destroy initiative by making the pupil the slave of convention. Hence the often-seen depravity of children coming from overstrict homes. No real power of will has been developed; every moral effort has been made for them by some one else. We learn therefore that we must not deaden initiative by excessive coercion. A very strict school-system, displaying an excess of routine orderliness and repression, may secure a fictitious orderliness and appearance of good conduct not justified by subsequent development. Military order in school should therefore be exceptional, not habitual; a tonic, not a food.

Provision of opportunity for free choice

Obedience alone may be slavish and kill initiative; we must provide opportunity for free choice. Obedience is best cultivated by leaving at most times a large measure of discretion to pupils, by not subjecting them perpetually to the word of command. Teachers do not always think enough of the necessity of providing variety of opportunity for the exercise of good habits and for the detection of defects. Most people understand that defects of one or another sort will display themselves in especial force at some particular stage of development. Under ordinary circumstances, for instance, we may expect our pupils to display defects of feeling most unreservedly in early youth, when the feelings are usually most acute and the will is less effective for purposes of concealment, the two facts together explaining the obvious selfishness of youth.

Selfishness: its subtle forms and school cure

The forms which selfishness takes in persons of older standing are more or less subtle modifications—the vulgar noisiness of the underbred person, disagreeable tricks of behaviour, the careless use of the property of the community that includes oneself or of external corporations, and so on. The teacher, then, must watch the early signs vigilantly, while at the same time providing room for the exercise of self-restraint. Small children in their sphere must not strike or pinch one another, and should "behave mannerly at table"; adolescents in their sphere must have the care of common interests and corporate property imposed on them as a part of their discipline, a tradition in which our English public schools are particularly fortunate.

The care of common interests

It may well be believed that our own countrymen show, on the whole, a genuine talent for self-government because it has become a general practice in our schools to hand over some of the common concerns of the whole body to the responsible and intelligent care of pupils themselves. The government which in the Kindergarten should entrust the care of the common sponge to one little child, the government which in the middle school throws orderly duties on monitors, the rule which in public schools devolves certain details of discipline on prefects —each of these proceeds by the same route. We do not recognise the need for the ostentatious control of clubs and games in dealing with big boys and girls, though teachers are bound to assure themselves that things are working smoothly and that the growing society has the full advantage, as far as possible, of the experience of antiquity. For instance, we may not directly interfere with the conduct of a school club, but we are bound to provide all means for its business-like conduct. Little ones we encourage to play without malice ; and we should give big boys and girls who have formal meetings access to a "Chairman's Handbook," so teaching them the rules of the game, and placing their little provincial concerns in proper relation to the bigger affairs in which as members of an adult community they will have to take a responsible share. It is part of the teacher's chief business to get his pupils to recognise that laws exist not for the increase of restraint but for the increase of freedom. We forbid both ourselves and others to do or leave undone certain things solely in order that there may be more general freedom in the result to be divided up amongst all individuals. This is the kind of service which tends to perfect freedom.

But not only must we consider the stage of development which our pupils have reached ; we must also consider the varying circumstances in which they may be placed. It will not do for us to enjoin the duty of orderliness and neatness of person and to permit disorderliness of thought. Correctness and precision of thought should be maintained as carefully as propriety of person ; just as, in the sphere of instruction, we can make our teaching of composition or rhetoric effectual only if we exact intelligent and intelligible speech at all times. The order of development may be thus expressed

Correctness and precision ; the effort against the grain by the individual: I try; I do; I become. The first step is the effort to do or to make something. The total result is a permanent modification of character, which is good or bad according to the purpose which effort had in view. Effort implies difficulty, difficulty is disagreeable. Therefore, discipline teaches the pupil to overcome something against the grain for the sake of what lies beyond it, the achievement of something. The reward is not only that the effort meets with immediate success, but also that the next step, and all subsequent steps in succession, are easier. Physiologically speaking, nerve-structure is modified and a more constant "state" is set up. The pupil "becomes" something different from what he was before; the change has that general character which we call "qualitative"; it is a change or growth of character.

The school environment is artificial

We must recognise, teachers as we are, that at best we are only "journeymen," day-jobbers, assistants, and that the true and sufficient teacher ought to be the parent. The school is an artificial institution, and to the schoolmaster and schoolmistress their special work is assigned because the excessive differentiation of occupation on the one hand and the increase of conventional claims on the other take parents from what would appear to be their first duty, the education and supervision of their children.

Home the best nursery of virtue

If the chief means available for the production of a good character is the setting up of good habits, it is easy to see that the more permanent environment must present the more constant opportunity for exercise. In the next place, father and mother should have a more minute knowledge of the tendencies of the children that are theirs, the children whose personality, bodily and spiritual, springs from their own, than any teacher should be expected to acquire in the necessary reserve of corporate school-life. Again, the amiable or social instincts arise most spontaneously in the home by the sympathetic interaction of kindness rendered from the first dependence of the child on its mother. And finally, the little home society has its aboriginal legislators, by whose benevolent will the common happiness is visibly determined, whose pleasure forms the first common standard of reference in cases of doubt. This is the first form of conscience—the sense of pleasing or displeasing a parent. "The narrow limitation of the family circle and the restriction of sympathy to its few members are the most natural preliminary conditions for the development of sympathetic interest and good-will," says Professor Rein. The good home, then, and the good mother in particular, are under ordinary circumstances indispensable for the production of the good character. We may not, of course, say that good men and good women have not come from surroundings which have been, to all appearance, entirely evil, just as beautiful flowers may grow upon refuse heaps; but there has been something special and extraordinary, something unaccountable, in their constitution or history, which has vanquished the diabolic influence. The business of the teacher is not primarily with such as these; he deals with the ordinary case, not genius, moral or intellectual.

The parents depute their duties to teachers

But society is so constituted, and father and mother have so many things to do, legitimate or unnecessary, outside the home, that they must needs hand over their duties, as for many generations they have already done, to the teacher, who undertakes to specialise himself for this work. He does not always try to train himself, we know only too well; he often thinks that as nature has (unfortunately) prescribed no test of fitness before people undertake the duties of parentage, so also art need not prescribe any rules for the admission of unfit people to exercise the privileges of teaching. Alas! the possession of many children is no proof of fitness to possess them, nor does the wielding of the rod give a real right to handle it. If it did, the position of the teacher who makes his first experiments unwatched and uncorrected is that of the good woman who was rebuked for feeding her year-old babe on salt herring. "I ought to know," she said, "how to bring up children. *I've buried ten.*"

The school a half-way house between home and the world

But the school is a half-way house between the home, on the one hand, incompletely provided with the time and apparatus necessary, and, on the other hand, the world, where the penalty of unfitness or unpreparedness is exacted so pitilessly. Or shall we say that the school is rightly a kind of "purgatory," in its true and legitimate sense for the pupil, even if too often it is a "purgatory" in its secondary or derived sense for the ill-prepared or dispirited teacher?

The school provides precisely that large field for the exercise of virtue and for training, physical, moral, and mental, which the smaller family circle may lack, though the wisely ordered family circle may be as good as the best school—nay, better—except perhaps for the cultivation of the first aptitudes for conducting public affairs publicly.

The school can confirm home training and fill up gaps. Virtues and vices

Consider the personal or private habits which the school helps to train. Unselfishness is fostered at home by persistent checking of unpleasant tricks, bad habits in care of the person and at table, the abandonment of things to be done by others which should be done by oneself. It is taught on a large scale at school by enforcing respect for the common convenience, comfort, and property. Habits of personal cleanliness and propriety become at school more inevitable because the loss of public respect is more impressive than the reproof of those with whom we are more familiar. An evil temper and disobedience meet at the school a more automatic punishment than they can at home, for the immediate obedience exacted from a large body is easily recognised as lying at the root of the law and order which are necessary for its existence. At home we often choose the easier path of passing over disobedience, just because it is easier, but at school it is not easier, and so we more consistently repress it. Shyness, often really a want of trustfulness, which is cured at home by encouragement to fear nothing and to suspect nobody of a desire to hurt or belittle one, must be finally routed at a wisely administered school by the tact of the master or mistress who teaches the ill-bred shy boy or nervous girl to do something well enough to deserve legitimate praise and public respect. Cruelty shows itself at home in the natural weakness of children's constructive imagination and sympathies acted on by the love of power which seems common, in greater or less degree, to every healthy-minded person. At home we check it by directly cultivating the sympathies and teaching the child to imagine itself in the place of others, giving it opportunities for the practice of helpfulness. At school we have to cope with it most commonly in the form of bullying of younger by older boys and in the spitefulness which is understood to occupy a corresponding position amongst girls. For this there is nothing but a gentle vigilance and Arnold's plan of making the older the responsible guides and friends of the younger, thus providing a benevolent sphere for the exercise of power and influence. Even fagging may be made beneficent by a cheerful recognition of a natural institution conditionally on the older boys recognising their responsibility for the comfort and progress of the younger. And it is worth while to point out here that one of the conditions of the successful exercise of discipline by boys or girls themselves is that they should be of varying ages. A monitorial or præfectorial system is rarely successful in a school if rulers and ruled are of nearly the same standing.

The sense of justice as a motive with young people

A somewhat serious mistake to be carefully avoided is the endeavour to appeal to a very young child's sense of justice to the neglect of his sympathies. The elemental social feelings are there to our hand, but justice is a very complex and highly intellectual conception not to be looked for in a little child. It is far safer to rely upon the cultivation of the sympathetic imagination. The great practical moral injunction is not to distribute justice to every one,—in which case few of us would escape whipping,—but to do to others as we should like them to do to us. This is the way to cure the little habits of selfishness and greed which make youth unlovely and develop into grosser forms,—cruelty, discourtesy, uncharity, in the course of adolescence. When however the boy or girl has been taught to reflect, and has learnt to overcome the natural disinclination to give to everyone his due, our task is an easier one, for we may then make open appeal to a growing sense of fairness. Justice is, in a sense, a compendium of virtue, at all events in one stage of human development; but it is, just because of that, a comparatively late stage, and the teacher must act accordingly.

The school is, as we see, particularly well adapted to be the nursery of what may be called the public virtues;

The school may be a seed-plot of public vices, and for some forms of virtue provides no exercise

and it is equally the seed-plot of public vices. For the sowing of some of the private virtues it is very stony ground indeed. As our school system is constituted, if a boy does not learn to be chivalrous and to respect weakness at home, he is not likely to learn the lesson elsewhere. Sisters and mothers are not common in the monastic community of a public school. If a boy or girl has not learnt at home to be generous in the imputation of motive, the absence at school of the intimate companionship and daily conversation of wiser and older folk will leave the tare to grow till it becomes habitual uncharity. Again, the courage that enables us to bear pain at home and to speak the truth is sorely tried when it is called upon to help us to face obloquy and public dislike in a righteous cause against large numbers amongst whom our whole life is lived. Of course the lesson has to be learnt, but in a school where the "tone" is not good, it cannot be learnt. Hence the very solid ground of Dr. Arnold's peremptory exclusion from Rugby of all moral suspects. For more harm is done in a school by a few influential bad boys or girls than good by a few, however much respected, who comport themselves well; and every one knows how difficult it is to pursue and destroy an evil spirit that has once secured its hold. We cannot of course all hope to possess the powers held by Head Masters in the position of Dr. Arnold, nor is it certain that most of us would use such powers wisely; and on the other hand, as schools come to be managed by state functionaries or elected bodies, the Head Masters and Head Mistresses find themselves (for good or ill, this is not the place to say) much less autocratic. But the power of school-life and school-

Expulsion as school discipline

death once generally regarded as the inalienable privilege of the Head of a school certainly makes it easier to remove the elements of disturbance and demoralisation in good time.

The size of schools

This necessity for vigilance in dealing with the plague spots is a very strong argument against the undue enlargement of schools in all grades. In the highest grade of schools the Head may count on having on his staff a large proportion of seasoned and responsible colleagues, whose vigilance and sense of duty to the whole school may be as perfect as his own, and whose knowledge of pupils, if the school is of the residential type, will be ample and intimate. But in enormous schools of other grades, where masters and mistresses see their pupils only for a very small part of the working day, and where they have unmanageably large classes, the difficulties of satisfactory guidance and supervision are an unreasonable tax on the resources of every one.

Truthfulness

Truthfulness is not a virtue that we can easily isolate. It is almost as much the product of the sound intelligence as of the healthy temperament. Neither heart nor head can do their best unless fair treatment is meted out most scrupulously; treat your pupils with justice, and their good sense will be the best guarantee of a reciprocity of fairness. It has often been noticed that behind the lie there is always some meanness or selfishness, a desire to outwit for gain or to evade a penalty rightly imminent. It is these that must be tackled in lying of the genuine sort, and the younger the offender the more cautious must the treatment be. A child must be won to truth and courage; it cannot be frightened or bullied into it. Appeal first to the sense of self-respect, of dignity. What is the child's ideal?

show that untruthfulness falls below it. We must not predicate "wickedness" of a little child and tell him he is wicked. To do this is itself false and wicked. A timid little child may be drawn into the habit of truthfulness by being made to understand that to be trustworthy is a mark of grown-up goodness. "Grown-up-ness" is his ideal.

A pupil will soon begin to feel the force of intellectual truthfulness. The careful teacher who faces the difficulties of learning in the company of his class, who performs an experiment, construes an unseen passage, works out a problem, with an obvious desire not to let himself or the class be deceived into thinking that a point has been mastered when it has only been ignored, is cultivating that taste and preference for seeing things as they are and for so describing them which are the essence of the virtue.

Careless teachers do most of their proper mischief because they have not acquired the scrupulous habit of intellectual truthfulness. The lack of it is not felt by themselves; they would be indignant if we tried to bring it home to them. But from the want of logic and from a touching belief in the performance of "experiments" as "science," the science lessons in particular are often full of reckless deceptions. When, for instance, a child is invited to infer from a single illustration, miscalled "experiment," that "heat causes things to expand," he is made to commit that particular offence against logic and truth which is the fountain of most of the errors of reasoning that plague mankind—the inference of a general law from one particular. Lessons in other matters may, in their degree, all conduce to the same end, if the teacher's logic is always of like quality.

Bad teaching, and especially bad logic, may plant untruthfulness in the soul

Imperfect classifications, bad definitions, fallacies of every kind, the fruit of a lack of logical training, all tend to nebulousness of teaching. It is not too much to say, then, that the first duty incumbent on the teacher who would teach truly and teach truthfulness is to learn and to practise the elementary rules of logic. Psychology may wait until the teacher knows how to discriminate a good argument from a bad one. As soon as he knows the meaning of logical inference, self-respect will not permit him to hoodwink himself or allow others to be hoodwinked.

It is excellent discipline, not for pupils alone, if a teacher will put himself out to find some work in which he is *not* proficient, and will do it with the class for company. Most of us could probably find some such gap in the omniscience which encases us. When the class sees how the teacher addresses himself boldly and honestly to each difficulty, every member of it learns a lesson which he can never forget; he feels that he has the same kind of wits as his master, perhaps less nimble and well trained, but capable of being used to equally good effect if used honestly.

Loafing

One of the most fruitful causes of school vices, large and small, is loafing. A man who has nothing better to do in life than to look on is always a poor creature, generally useless, often dangerous. Boys or girls, young men or young women, who naturally abound in energy and the desire for movement, must either work healthily, or else find a vent for their superabundant powers in some kind of useless or vicious excess. Loafing leaves the loafer at the mercy of the first pressure or temptation that comes to quicken the latent energy. Boys and girls should therefore have something to do; they must not merely stare and gape at others.

Hence the justification of the compulsory games of the great schools. There is an undoubted excess of athleticism at many, even most of the boys' boarding schools of these days, but the chief harm done is not to the athletes. It is true that the athletes receive more than their due share of honour and therefore waste a good deal of time; but they really do something well, and though they run the serious risk of imperfect development (like an ill-roasted egg, all o' one side) they do learn to work and to strive for a healthy end. But those boys and men who stand in crowds at the football or cricket match, and think themselves sportsmen because they applaud, get no good from the process whatsoever. This, of course, touches only those who have no interests that carry them abroad for other purposes, filling their minds and freshening their bodies. The quieter folk who wander afield in the service of natural history or geology or botany or the like are not loafers. They are getting fresh air and exercise in the way that pleases them best; they are not merely looking on; they are doing.

Morality not to be taught without concrete exercise

Can morality be taught, as such, in the school? And if so, can it be taught at any definite age or stage? Or should good conduct be taught as occasion serves at all times with regard to the pupil's power of comprehension and power to will? I think we shall probably take the latter view. Teaching should and can always be moral, but to teach morality by mere precept is impossible. If we address ourselves habitually to the task of isolating a virtue or a desirable opinion on conduct and presenting it thus to young people without being sure that they have the means to carry it into instant action or to feel its bearing on life, we are shutting our eyes to facts of which the teacher cannot afford to be ignorant. For first of all, the progress and growth of character, as of mind, is slow and in stages; and, secondly, the immature mind has not the experience necessary for realising the abstractions so presented to it. At most, our eloquence and earnestness may argue the young mind into apparently and in good faith accepting our opinion; but the effect attenuates itself into mere sentimentality unless the life of our pupil offers an immediate or certainly very early opportunity for exemplifying the precept or perceiving it in action. To teach a virtue without the concrete material in your hand, so to speak, you must needs appeal to the powers of reflection and judgment which are, as yet, so weak. You cannot hope to get a sincere and effectual acquiescence; your process is a kind of intellectual bullying. And there is no such thing as purely intellectual virtue. The oldest of us must have stuff to work on. Old Hazlitt knew this. "The habit of fixing the attention," says he, "on the imaginary and abstracted, deprives the mind equally of energy and fortitude."[1]

Sentimentality in children

It must not be forgotten that the cleverest children have an unhealthy turn for sentiment. There is no emotion which, gently stimulated, cannot be positively enjoyed. Robert Louis Stevenson has drawn the picture of a monstrous enjoyment of even extreme fear. But moderateness is usually, at first, a necessary element, and it is only repeated doses that dull the edge of appetite and make it ravenous for excess. The enjoyment of sad emotion, which we can take sitting (getting a stool to be sad on), is particularly attractive to the cleverer kind of child. A mother was once asked by her little girl for a story which always opened the fountain of her tears. "No," said the wise mother, "it only makes you cry." "Oh *do*, mother, tell me the story," cried the little sentimentalist, "*and let me cry!*" This mother was a wise mother, and declined to do anything so wasteful or—"pædological".

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[1] In "The Conduct of Life".

The stories written about children who are "misunderstood" and ill-treated by their elders have a most pernicious influence on young people. There is no warrant for this kind of moral topsy-turvydom in children's literature; it is an unusual and unedifying and debilitating influence, sapping a healthy child's healthy confidence in the sagacity and goodness of older people, and making it suspicious and self-conscious.

Morality cannot be "taught" in treatises

Our neighbours in France have a considerable school literature meant to teach morality directly. The effect of most of these on the English ear is inexpressible. If we teach morality as a system, we must needs introduce our youth to all sorts of breaches of good conduct which they might not and probably would not hear of until they were strong enough to place such matters in proper perspective. In some French books for children you may read pages of arguments to show the impropriety of suicide. No English teacher would think of dwelling on such a subject as this in the course of his school work; and it may be laid down as a general rule that no breach of morality need fall under school treatment which is not directly suggested by school relations.

We must *be* good before we know what goodness is

It is a fact that it is harder to know one's duty than to do it. If the best and maturest of us hesitates, he is lost. All the more should young minds not be invited to think about the composition of virtues, but rather be set to practise them. Habitual and persistent injunctions and prohibitions, again, however earnest, however strongly backed up by argument, come to very little unless the opportunity for practice presents itself soon and is at once used. If it were not so, both preachers and congregations would be happier than they are. Much breath is at present wasted to no purpose.

On the other hand, school life offers ample opportunities to the teacher to drop the little word, to insinuate the great moral, to cultivate a preference for the right and a contempt for the wrong. But, above all, let there be no nagging.

Rewards and punishments—both have been overdone

Much has been said and much written about rewards and punishments. Both have been condemned, both have been overdone. We have seen already that discipline has sometimes been inordinately harsh, breaches of prescribed decorum being invariably punished, and punished severely. But, in the world, the appeal to emulation grows more intense, it would seem, as the general pressure of competition becomes greater; and we do more in these days by offering rewards and prizes. It is seen that great prizes are got in life by the strife of one against the rest, and the practice is copied and repeats itself in the microcosm of school. Of course rivalry in the pursuit of wealth, of honour, of glory, has always moved men to action; and emulation has played a very great part in hastening the progress of civilisation. But the giving of prizes to the young may be dangerous in three marked ways. It sets up and helps to make permanent a desire to get something for oneself which others have not, rather than to do what is right or pleasing to those whom we ought to please. It is a bad form of the error that measures worth by what it can do, not by what it is. It may easily stir into life the unsocial feelings, vanity and malevolence. These objections are indeed all well-founded and probably borne out by the experience of most of us, and can be counteracted only by the good sense and vigilance of a very careful teacher. To young children prizes for unique distinction should be given very sparingly if at all, for young children lack as yet the self-control and balance which enable the older people to "play the game" unselfishly even in great things. If rewards are to be given, then they should be sufficient in number to include all who have done their best; for our praise should be of character, not of achievement. The *laudum arrecta cupido* can do nothing but harm in the young. As the child matures, the prize may be less harmful, but at all ages there is real danger of exciting in an impressionable person a subtle vanity which may seriously check continuous effort. Where, on the other hand, it is necessary to find out which of a large number is best fitted to proceed to a certain farther step, as in the award of some scholarships, then discrimination is perhaps inevitable; but it must be made as innocuous as may be by means of the caution administered at the proper time by the wise teacher. And of all forms of reward, the encouraging word in season, not too freely given, is still the best of all. It must be said, however, that the offer of a prize for some special study or object has often stimulated into life a special capacity or taste that would else have lain unused and have added nothing to the achievements of practical life.

Prizes particularly bad for the young

Punishment is more indispensable for the exercise of discipline than are material rewards. For the greatest of all rewards comes naturally in the consciousness of the task completed. The intellectual and moral satisfaction of work well done may be always counted upon by the teacher as almost automatic. If the teacher can get his

Punishment more indispensable than material rewards

pupils to feel and recognise their own progress, then virtue is indeed its own reward. It may almost be called the divine reward, for they "see that their work is good". As with rewards, so with punishments; we should economise. The school or class where there is much punishment is a poor school; the chief and most effectual punishment should be the disapproval of the teacher and school-mates. If other punishment is to be inflicted, it should be really painful, especially if it is thought necessary to inflict bodily pains.

Corporal punishment is often necessary and harmless

On the question of corporal punishment we have a host of authorities and little common ground. My own experience leads me to believe that with a young child of ordinary temperament and health the infliction of corporal chastisement is often absolutely necessary in order to prevent a too painful, perhaps fatal, experience of the automatic punishment of "natural" consequences. A young child's sensations are acute, and the deepest impression is made through that channel. Suppose for instance (I quote a real case) a little child, full of life and movement, is told not to climb a dangerous balustrade which it has been found trying to climb. He still climbs it. A child of five has not sufficient constructive imagination to figure to himself, in the face of such immense temptation, the displeasure of the parents or nurse who have issued the prohibition; nay, the temptation may have obliterated the memory of both prohibition and displeasure. In such a case there is no such economical and effectual deterrent as short and sharp physical punishment, *flagrante delicto*. If we defer punishment and give its infliction an air of laboured circumstance, it is apt to appear to the very young child as vindictiveness. The child does not forget a punishment, especially corporal punishment, in the presence of the *pièces justificatives*, and he understands the indignation that accompanies it as a moral reproof, not as revenge, for the punishing authority has no obviously selfish concern. Vigilance wide and continuous enough to prevent the child climbing the balustrade may be, as life is constituted, impracticable; and it is certain that perpetual overlooking and shielding from harm prevents the growth of strength, both physical and moral. We give the children freedom and punish them if they misuse it.

It will be found that the opponents of corporal punishment are most often persons who have not had the permanent daily charge of young children. Such discipline may not be necessary at school, if it has been administered when needed at home; but parents may reasonably resent the comparatively academic formulations of those who treat children in a rarefied atmosphere, where corporal punishment may be, and indeed generally should be, and is, unnecessary.

As children grow, such punishment should become less and less necessary, for imagination, sympathy, and reflection can all be appealed to with more certainty. But it should be remembered that the school has to make up for the defects of home, and a spoilt home-child may not be spared the rod elsewhere if the rod is needed. It is also to be remembered that the child takes physical restraint and bodily pain as the natural order of things; to him the universe of pain and pleasure means mostly physical pains and physical pleasures, and it is on stepping-stones made of these dead feelings that we raise him to higher things. Again, mere love without respect is a very poor sentiment, not, indeed, to be encouraged. The child's love for his parents and his teachers will be the stronger if he

Children regard physical restraint as natural is conscious that there is power behind, to protect as well as punish. The mental, moral, and physical superiority of the parent or teacher being incontestable, both positions, of protector and punisher, present themselves to the child as reasonable: they would be unreasonable (as for instance in the case of the wife-beating husband) if the superiorities were open to doubt, even though the beating were deserved.

Physical rule therefore, and the physical rule of pain and restraint, seem to be desirable, as Professor Earle Barnes apparently thinks, in three distinct cases, which cover all we need here contend for,—in dealing with young children, with primitive peoples, and with certain types of spoiled people. Specimens of all these three classes are to be found in most schools. But of course such punishments should be inflicted as rarely as possible. With older pupils it is generally understood that certain faults, such as cruelty, and certain forms of vicious disorderliness, call for the penalty of the rod, and to this opinion I myself incline. Above all things, it seems to me necessary that punishment should be inflicted not in anger, indeed, but in "warm blood". If it loses its accompaniment of strong moral indignation, then it presents itself to the culprit as revenge. A person who has so little self-control as to get angrily savage in inflicting punishment should not be a teacher at all. But a visible righteous anger is one of the most salutary educational influences conceivable.

Punish when indignation is warm

It is well known that the power and the practice of recalling old impressions depend upon the strength of the associations that are brought into play. We connect things or ideas without necessarily knowing that we are doing so. Under

Suggestion as a means of discipline

ordinary circumstances an idea lies unevoked until something comes to "suggest" it. What is true of the so-called intellectual process is true also of the moral; and the evocation of an idea suggests its being carried into effect, issuing into action. "How oft the sight of means to do ill deeds makes ill deeds done!" And good as well as evil obeys this law of impulse. Of this it is the duty of the teacher to take immediate advantage.

Imitation

The exact nature of imitation has puzzled the psychologists in no small degree. They are not even agreed as to the presence or absence of will in the first act of imitation, some declaring that it proceeds from "impulse" entirely automatic. Understanding current terms in their current connotation, I should prefer to adopt this latter view, because I prefer to attribute "will" to human beings only; if mere imitation from the first implies will, then monkeys and parrots possess will.

It is enough for our present purpose, however, to recognise that for some reason or other the sight of an action or a person acting may become, under the operation of sympathy and imagination, a kind of obsession; that indeed it does become so. In this way the lively ideas evoked by the earnest words and example of the teacher are amongst the strongest motives that stir the pupil to action. From this point of view, suggestion is of the deepest importance to teachers. Imitation is in a sense the origin of human institutions, manners and customs, fashions and conventions, of all kinds. It develops into habits or morals, on the side of volition; and into ideas and insights on the side of the intellect. "Thought-reading" is said to be mere sensitiveness to suggestion; and hypnotism, an undoubted fact, is another form of the same phenomenon.

"Force of Character."

What we call force of character may be, and probably is, the power of evoking and quickening the feelings of others into sympathy and imitation by suggestion—a reflection of the utmost importance to the teacher, for he is thus called upon to regulate his bearing and conduct all the more scrupulously because of the weight which his position of authority may give to his slightest act of suggestion. And every one should remember that, as iron sharpeneth iron, so a man sharpeneth the countenance of his friend; suggestion may and does come in many forms and at all times whenever two or more are gathered together. Precepts, injunctions, prohibitions, all act by suggestion. If we are perpetually telling a child that he is "naughty," naughty he becomes. If Tommy is told not to push peas into his ears, he is known to feel an importunate desire to do it.

We must not forget that much of the work of the world, the best and the worst too, is done because people behave as they know we expect them to behave. The wearing of a uniform, material or moral, makes a wonderful difference in one's demeanour and in one's conduct at a crisis. It is well to remember this in school. The parent or teacher who is known to expect honesty and obedience usually gets it, and contrariwise, ostentatious distrust and perpetual nagging, enjoining, and prohibiting, end only in demoralisation.

Fiction again by its power of raising impressive and importunate ideas, acts on us by suggestion. We become the characters about whom we read; something in our nervous organisation adapts itself to the constant pictures of our imagination. We find it easy to act the parts that are most familiar to our minds. We may well be careful, then, what sort of books we leave in our pupils' paths.

For reference:—Prof. James's *Principles of Psychology* (briefer *Text-Book*). Prof. Rein's *Outlines of Pedagogics* (van Liew's translation). Prof. Earle Barnes in *Education*, March 1898, and the same writer's *Studies in Education*. Harris in *U.S. Reports*, 1893. Prof. MacCunn's *The Making of Character*. Prof. Laurie's *Institutes of Education*. Herbert Spencer's *Education*. Bain's *Education as a Science*. Harris's *Psychologic Foundations of Education*. Prof. Lloyd-Morgan's *Psychology for Teachers*. Compayré's *Intellectual and Moral Development*. Herbart's *Science of Education*. Mrs. Bryant's *Moral Education and Educational Ends*. Messrs. Sidgwick and Buckle in *Teaching and Organisation*.

CHAPTER III

THE PHYSICAL BASIS OF EDUCATION

What a piece of work is a man! how noble in reason! how infinite in faculty! in form and moving how express and admirable! in action how like an angel! in apprehension how like a god! the beauty of the world! the paragon of animals! And yet, to me, what is this quintessence of dust? —*Hamlet.*

The assumptions of sciences

PHILOSOPHERS, as we know, have long been busy in the endeavour to arrive at a proper understanding of the relation between knowledge and existence. The profoundest question that can be offered for solution is the exact meaning of the words I Am, and I Know. But, like other special sciences, psychology begins, so to speak, lower down in the hierarchy of systematised knowledge. It takes things for granted which on the strictest grounds of philosophy have to be proved. As a natural science, it assumes that matter exists quite outside of and independent of the mind that perceives it. The science of physics has its own assumptions, and chemistry and physiology theirs in their turn, the one accepting the *data* supplied by others. Psychology assumes the existence of thoughts and feelings, and assumes that by means of these thoughts and feelings, or states of consciousness, we can *know* other things.

Now the psychologists show us that, as Professor James says, mental life exists primarily and at bottom

Relations of mental and physical life

for the sake of action that preserves the life of the organism It is an endeavour to adjust our inner to our outer relations. There is no mental condition which is not accompanied or followed by some kind of bodily change obvious or concealed. If, then, teachers can get some sort of guidance in the endeavour to infer one from the other, to interpret bodily signs in their relation to mental activity, and to forecast in some measure the effects of mental activity on the body, it is clear that their task can be performed th a certitude otherwise unattainable. Of course the least experienced of us is accustomed to make some such inferences unhesitatingly; they are part of the common stock of every-day knowledge. We know well for instance the physical signs of Anger—the convulsed hand, the flushed face, the corrugated forehead, and so on; Fear, too, and the rest, bring with them equally unmistakable signs. But the physical changes associated with most states of the mind are so complicated and so obscure, that the teacher must needs place himself in the hands of the physiologist, and do what he can to learn from physiology what it has to tell him about brain action. He may at all events by this means be able to interpret the signs of physical distress or defect so intelligently as to save himself useless labour and spare his pupil (or patient) useless pain; his judgments will be more accurate and therefore more humane.

The physiologist tells us that with every state of consciousness there is associated a change of some sort in the brain, and the brain is the centre or register of the "voluntary" nervous system. The teacher does well, therefore, to get some idea of the way in which the nervous system puts us in communication with the outer world.

Let us note some of the practical uses to which the teacher can apply this kind of knowledge. First of all, taking it in its most general aspect, the hygiene of the effort to learn: why should the effort to acquire knowledge conduce to health? Why, indeed, is it necessary to health? The reason is this: that the brain does not grow except under the conditions of exercise; the stimulation of the nervous system, so long as it is not beyond the degree at which recuperation is possible, tends to make it strong, not to weaken it. When the nerve is quickened, something is "discharged," a chemical change or some sort of "combustion" takes place in the nerve-cells. Under conditions of health, this something is replaced by some other thing like itself but of better quality. There is growth, as we say.

Brain exercise is a condition of health

The mere savage, however fine a fellow he may be physically, is not so truly healthy as a well-developed member of a society in a high state of civilisation; he lacks balance. He may have the acutest senses and a very powerfully developed frame, capable of resisting most forms of physical hardships surpassingly well. But he is still inferior to the more delicate civilised man in that the civilised man can resist a larger number of unfavourable influences and in greater complexity; he would remain sane and healthy where the savage would be lost. He is not so subject to the sudden outbursts of fury which are signs that a man's inner life has ceased to be in safe relation to the world outside. It is a fact that there is more insanity amongst uncivilised peoples than amongst others, and that although the population of civilised Europe has grown so enormously, insanity has not, happily, maintained the same proportion, even though

The best educated are the healthiest

there is a tendency to reckon as insanity smaller aberrations from the normal than heretofore. But more than this; there is less insanity among the educated classes, as they are called, than among the uneducated, less in town districts than in the country, less among persons who use their brains well than among those who use them little. And all this is akin to the fact that the imperfectly educated human being cannot look so far ahead as the one who has been accustomed to investigate cause and effect farther, to follow out acts to their consequences and to provide against contingencies.

Education of the senses not enough

Again, if education stopped short with the senses, and if mankind were not driven by its desires and inquisitiveness to argue about and infer from sensations, we should be hardly better than acutely sensitive animals. Somebody has said that if we had had the fine olfactory sense of the dog, the keen sight of the eagle, and so on, we should not have felt the call to cultivate our apperceptive powers, to generalise our knowledge in due order; and we should have remained monkeys instead of being related to the angels.

The warning against excessive exercise of function

The physiological bearing of brain action conveys another warning to the teacher. We have seen that exercise is indispensable to growth, and indeed to existence; we know what is meant by the maxim that practice makes perfect. Up to a certain point the repetition of the functional activities of the nerve makes other similar activities easier. But this may be overdone. The discharge of energy may be so persistent that no time is given for repair, for the replacement of those materials in the tissues which, combined with oxygen from the air, are the source of this energy; or incessant repetition may make the loss of energy automatic and therefore involuntary. We must not therefore expect good results from too long and strong a dose of the same study. Moreover, physiology teaches us that the store of mental energy available is strictly limited, and that it can be exhausted not only by excessive persistence in the same study, but also by excess in a variety of studies.

Within limits, of course, a change of study, by setting up different combinations, is really a kind of rest. But the operations of mental combinations, the result of movement, of sensation, and so forth, all take place in the same continuous brain cortex. You cannot play any game, athletic or other, without associating mental effort with movements; and the consequent inference on which the teacher must take action is this—that if pupils are having a great deal of violent exercise we must not expect from them strictly intellectual work of the best quality or in great quantity. A long run is a severe strain, not on the heart alone, but on the brain; and there should be a very substantial interval of rest between such an effort and any kind of severe brain work; it is rest that repairs. In schools this form of error is less likely to cause distress among the younger pupils than among the older ones. Young children are not usually so emulous as their elders; they certainly do not look as far ahead and are not therefore so ready to postpone present comfort for future gain. They more readily give way to the sleepiness and lassitude by which nature calls upon them to allow their nerves the rest that is needed for their recuperation. But in the upper forms of schools and in the universities the mischief is very considerable, and there is some risk of its spreading from men to women. Many a fine fellow has acted on the presumption that a candle can be safely burnt at both ends; and in not a few of such cases the penalty has been exacted years after the offences have been committed. Men have got into their thirties, perhaps forties, as scholars and athletes, and have then become confirmed invalids.

But all these considerations having been duly weighed, it is still true that exercise of all the powers, intellectual as well as bodily, is necessary for health. It remains however, for the teacher to note and make sure of the signs of *distress and defect.*

The observation of distress and defect

The apparatus needed for this purpose can be as elaborate as the observer may choose to make it. But, undoubtedly, the simpler it is, the better able will the teacher be to take his pupil unawares and therefore in the best position for giving useful indications of his real condition: At this point we will deal solely with such observations as any teacher may make with the least ostentation, not with the view of discovering general laws of development, but of detecting nervous incapacity, temporary or permanent, in individuals.

Physical observations

It is much to be wished that every school weighed and measured its pupils three or four times each year, or even at the beginning and end of each term. The loss of weight in relation to size would at once give the teacher a hint that his pupil was suffering from defective nutrition in some form or another, and he would ask himself whether there was anything in the school work or the boy's work out of school to account for the unhealthy condition. In a boarding-school, the school doctor would be consulted; in the case of a day-school boy, the parents would be notified and warned; and the teacher himself should "go easy" with the case. In any circumstances it is certain that when disproportion of age, weight, and size is noticed, a pupil may be suffering either from some constitutional weakness (which would need special and continuous treatment) or from insanitary surroundings, from overwork, or work ill-distributed, from insufficient sleep, from underfeeding, or from too rapid development.

One of the most systematic and patient of observers and one of the most helpful of writers on the study of children is Dr. Francis Warner, whose book *The Study of Children*, contains a short schedule of heads under which a teacher may usefully group his notes on each pupil. His classification does not exclude other schemes, but it is particularly valuable to the young teacher because facts of connexion have already been ascertained showing how the phenomena, familiar to the physiologist, can be turned to immediate account in the class-room and in the management of pupils by the teacher. And these established physiological facts are far more important to the young teacher than any inferences he may himself be tempted to make on the grounds of a limited experience and comparatively untrained observation. He should certainly first learn to base his observations on ascertained physiological truths.

It is especially important to remark that the changing conditions of brain action under stimulus are infallibly indicated by movements of various parts of the body. Our scales and our measuring-tape, our more or less exact views of facial and general bodily symmetry, may give us a good beginning on which we can enter deliberately, at our pleasure. But above all things we are to bear in mind that it is by the rapid and exact observations of movements that we can determine the modes of defective mental action under our eyes; and under the general term "movements" we are to include all changes of posture, balance, gestures, and so on. Furthermore it is to be expected that the inferences will be easier to make in dealing with childhood than they can be in dealing with adolescent or adult life, for the obvious reason that young children are less self-conscious, less likely to control abnormal movements by spontaneous effort.

The discipline of movements

And there is another and most valuable reflection arising from this fact; and that is, that the discipline of movements, or as we may say, of dexterities, is of the highest value not merely as indicating but as stimulating corresponding mental action. While the mind is most plastic, most easily biassed, as it is in youth, the senses and reactions in movement should be cultivated so as to work harmoniously and develop as fully as possible, not for their own sake merely, nor for the products of their activity, but because up to a certain point it is demonstrable that their development is connected with brain development, and their healthy condition is indispensable to health of brain, just as inability to perform certain movements correctly is at all ages a test of specific mental defect. Those who are familiar with the work of Froebel, will remember that Froebel lays it down that children should actually handle the geometrical and other objects which are placed before them. It is not enough that they should use their eyes alone. The senses must be co-ordinated, and co-ordination is effected, an adjustment is made, in the brain acting as the "clearing-house" or central receiver and transmitter for the messages brought by hand and eye. The sensation of touch pure and simple without what is called the muscular sense, which is really an inference, is of little use to us, so children must touch and see and handle at the same moment if the circle of co-ordination is to be completed and their knowledge is to be made serviceable.

The manual dexterities and co-ordination of brain and limbs

The manual dexterities, as we can see without much trouble, involve more than the exercise of themselves. The single movement or single series of movements, however accurate, does not rise to its proper complexity as a means of intellectual education until many senses are involved and until the adaptation of means to ends is a process involving a multitude of steps. The little chicken which almost from birth can co-ordinate its motions so accurately as to snatch up unerringly a morsel of food at one peck has reached a state of development relatively much farther on than the child of six months which with difficulty finds its way to its own mouth; for the human being struggles towards the power of co-ordinating movements at every stage by complicated intellectual processes, although at later stages of development he may provide for contingencies so far off as to be almost inconceivable. So the systematic teacher of little children keeps her eye on the simultaneous cultivation of as many senses as can be compassed in one exercise.

We may be sure, then, that in carefully cultivating the powers of children to do things with their hands we are also increasing their powers of thinking; it is not a purely mechanical capacity with which we are enabling them to endow themselves, but we are stimulating capacity to *grow.* Let us look at it again. The healthy child must be doing something. There are no such things as idle hands attached to a well-developed young human being, and the mischief that Satan is said to provide is merely misdirection of healthy, that is holy, energy. The young body, with blood bounding in every artery and life exuberant in every nerve, cannot keep still. The endeavour to repress activity of this kind altogether is in truth a violent upsetting of the whole life-system. But activity can be most usefully directed, and this is done by sympathetic co-ordination. By all means, let the child Do, but let him, as Froebel puts it, Learn by doing.

Imitation

With this inborn activity a young child possesses also large powers of imitation. "Make-believe" is a very large part of every little one's life. Play, said Froebel, is positively the child's highest development, and Robert Louis Stevenson was strictly accurate, and a Froebelian of the deepest dye, in regarding it as the real part of the child's life; it is at all events the freest exertion of all his powers. It is not, we must note, the mere mimicry practised by the monkey; for the human being not only imitates, but is, for the time, the thing he imitates. This is exactly illustrated by Professor Bain's statement that whenever a person shows "spontaneous and unprompted facility" he will also in the same respect be "imitative or acquisitive".

Play

It is difficult to believe that there ever existed a prejudice against play as a waste of time, a degradation of a human being meant for better things. No particular school of pedagogy however has had a monopoly of this view. Repression and silence have too often been the guiding principles of teachers who have otherwise laid mankind under very great obligations. Take for instance, the *Constitutions of the Monastery of Port Royal*, a typical case. On every page of the regulations the reader is struck by the constant injunction of silence. And a truly great and good English clergyman at the end of the eighteenth century would spend hours on his knees, they tell us, because his little pupils, do what he would, continued to sin by playing.

We cannot doubt that the right view of play was that which was propounded to teachers and to the world first of all by Froebel. He taught that in childhood play is the highest manifestation of human development; the child cannot possibly do better than play well. Play is, in fact, to him what the work of art is to the grown man. In play, his capabilities find freest and happiest and consequently highest expression. It is therefore the duty of teacher and parent to watch and guide the child, with as little ostentation as possible, at least no less in this than in other forms of activity.

Every living creature, we may be sure, has its play, its delighted exercise of the powers which it possesses in finest condition; but the child differs from other animals in being much slower in development, and therefore in power of co-ordination. He is helpless for a much longer time, having regard to the vigilance and knowledge necessary to save him from harm. It is therefore the duty of the teacher (or educator) to provide above all things the freedom, and then the protection and guidance, which are indispensable for the development of youth.

People who know little of the real bearing of organised education as a preparation for life find it easy to make merry at the expense of Kindergarten methods, and it is true enough that for various reasons, not always under the control of the teachers, we too often find the shell without the kernel, we see the procedure of the Kindergarten "system" without the inspiration of its founder, aimless mechanical drill and chatter, alternating with romps. But the principle and the main practice too are sound because they are based upon demonstrable facts of human development.

Here of course we are dealing with play and games only; but it may be observed in passing that in a reasonably organised Kindergarten, progress, as measured by ordinary standards of attainment, may be apparently slow; but afterwards, in the higher classes, the children who have passed through the Froebelian course, sometimes after an awkward pause, occasionally move most markedly in advance of those of their comrades who have had no such advantages.

The dangers of Kindergarten

There is some foundation, however, for the complaints made against the Kindergarten, to the effect that progress is often slower than it need be. For the formalist teacher iterates and reiterates the teaching steps, works with unintelligent rigidity through the prescribed stages, and displays an undue fondness for such mere machinery, not necessarily devised by Froebel, as answers in "complete sentences," and the like. Any whole "system" should be taken as a type, not as an iron prescription. Froebel was a teacher, not an official.

The special dangers of what are understood to be Kindergarten methods lie, at all events with English children, in excessive interference and governance. It is sometimes forgotten that Froebel and his most eager followers have dealt with racial, social, and political conditions materially different from those with which their English and American disciples have to reckon. The little English or American child is not quite the same as the little German. He does not live in such an atmosphere of regulation, of police. Personal freedom is more surely bred in his bones; he is a more restless animal generally, and is less amenable to uniformed restraint.

There is such a thing as a national or racial character, and the Anglo-Saxon character is not marked by patience under methodical external coercion, however brought to bear. The little German quite naturally passes from the drill and direction of the Kindergarten to the military organisation of which he is henceforth a part, and he finds his place the more unhesitatingly and uncomplainingly in the military machine if he is already well drilled and bent in a well-defined direction. But the little English or American boy, passing from his first school, finds himself not in another sort of well-ordered though more extensive garden, but rather in a sort of bracing wilderness through which from the very first he is required to make a good deal of his path for himself. The rigid Kindergarten training therefore may make him figure too often amongst his less methodically trained comrades as a little "prig". Examples have not been wanting.

Of course Kindergarteners will not admit that this is a necessary or even a common result of the close application of the methods of Froebel; but it is certainly a common result of the too rigid practice of teachers who take Froebelian prescriptions as an inspired gospel from which no jot or tittle can be safely omitted. The remedy, of course, is to cultivate Froebel's teaching in the spirit rather than in the letter; to regard the cycle of "gifts," "occupations," and so forth, as variable according to the teacher's own conviction of their sequence, adaptability, and propriety. And the young teacher especially should be sent to the fountain-head, to the great archetypal books, —Rousseau's, Froebel's, Locke's, Plato's—for inspiration; on the understanding that the reasoning and reflections and enthusiasm of the famous reformers are of far more value as inspiration and direction than any of their formulas, or systems, or prescriptions.

The play of older pupils and the *morale* of games

We return to the consideration of play. We must not forget that there are other young people besides the little child from three years of age to twelve, which seems to be the period of life exclusively regarded as educable by some writers on education. Yet without doubt it is easier to theorise with profit about the younger than it is about the older pupil, because the mental and moral problems become more complicated with increasing age. We can speak with much more certainty about the body-action and brain-action of the less sophisticated child. Problems of applied psychology are simpler in such cases, and results are more immediately manifest. For this reason, if for no other, a teacher in any grade, from the infant school to the university, would do well to begin his practice with young children.

As young people grow they organise games for themselves, and the wise teacher encourages as much as possible any initiative that may discover itself. If a boy or girl can invent a game, by all means let the game be invented. On the other hand if a game is played on a recognised plan, let the rules be followed with the greatest scruple, the observer interposing only with due regard to the age of the pupils. It is obviously necessary to deal with very young boys or girls more directly, but after they grow older, to leave the exercise of coercive influence and the imposition of penalties to the young people themselves, that is, to public opinion. For it is in wisely ordered school games that the teacher finds his opportunity to cultivate a respect for fairness and a reasonable sensitiveness to public censure of injustice.

Games are play organised, and are probably best when they permit entire freedom of individual action within such well-defined larger limits as are necessary to secure common action. Drill and gymnastics are not so useful for purposes of "recreation" as football or cricket, because the movements in the former are strictly prescribed and allow exceedingly little scope for individuality, whereas football and cricket throw ample responsibility on the individual for personal initiative unrestrained by any considerations beyond "playing the game," obedience to a limited set of regulations, not more than are indispensable for successful co-operation. It is a great general gain to the nervous system, and thence to the whole bodily and mental constitution, that uniform currents should be disturbed, that mechanical habit should be broken, that the power to co-ordinate brain and limb by sudden decision should be kept alive, active, alert

Their value as discipline and "recreation"

Games are therefore not mere "exercise" or gymnastics; they fulfil a far wider function. It is greatly in their favour that they have no conscious hygienic or utilitarian purpose; if they acquire this, they begin to lose their real value. They should be an end in themselves. Victory is properly rewarded by a crown of parsley; as soon as *virtus*, the quality of manliness, begins to be rewarded more substantially, it begins to be corrupted. The very essence of a game is its detachment from any motive beyond the mere winning. Again, "exercise" as gymnastics, may, and generally must, limit its beneficial operations to particular muscles or powers; games develop all and any. The very element of apparent disorderliness, which has worried those foreigners who see nothing but the hap-hazard and random surface of our national games, is exactly that part which is most useful, for it cultivates the habit of rapid concentration

The games as ends in themselves. Order in Disorder of purpose and co-ordination of movements to secure an immediate end.

To sum up then, good games should refresh or "re-create," should develop as many bodily powers as possible, should train muscles to rapid voluntary movements in no invariable order, should have no conscious utilitarian purpose while in progress.

An honest organised or combined game is the basis of a good working barbarian conception of duty; of selfish achievement vigorously and pleasurably sacrificed to the community; for an advantage which is not material, but merely for the delight of living vigorously and healthily.

"Exercise" and gymnastics in the second place

"Exercise" and gymnastics have their places, but they are formal, hygienic, curative, corrective, regulative; and useful as they must be, have a distinctly smaller moral value, and are therefore of less importance in education than games. Some training in gymnastics and drill is undoubtedly good for all; it is certainly profitable to teach people, old and young, how to move together at the word of command, and in a school it is almost indispensable for good order.

The uses of gymnastics

Gymnastics should be devised and supervised by qualified persons, and should be directed especially to correct bodily defects pointed out by medical examination. But great harm has very often been done by leaving young men and young women to use the gymnasium and its appliances at their own indiscretion. A gymnasium which is not properly watched may do far more harm than good. Boys and girls will strain themselves, will persist in a difficult exercise till they become "silly"; they will proceed directly to gymnastics after a heavy meal, and in other ways turn to their permanent loss what is meant for their benefit.

Gymnastics under proper conditions may be said to be directly useful to the teacher in three chief ways; first, as affording opportunity for observing and discovering certain physical defects and even defects of character; secondly, as a means of ensuring symmetrical development; thirdly—a point of special importance in dealing with women—as a practical protest and protection against the fashionable crazes which encase people within garments that cramp natural activity and lower vitality.

Games for girls

Distinctions must of course, be made between the games played by girls and those played by boys. To begin with, we must not forget that there are fundamental differences of physical formation; thus a blow from a hard cricket ball on the chest is a far more serious matter with a girl than a boy. There are differences of physical capacity and endurance; boys bear up more easily than girls against a prolonged strain. Moreover, girls "make-believe" at a heavier cost than boys; their intentness more easily passes into anxiety and excessive vehemence; they take the loss of a game more to heart. This last is, indeed, a defect which the passing of time may do something to cure. When the "race of women" has acquired an older tradition of corporate activity, they will learn to care more for the game and less for the result as it affects themselves. Girls' games should, for these reasons, be lively and spirited and short. If there are necessary differences between the games of boys and girls respectively, the questions involved are of even greater importance to the latter than to the former, for they have a long lee-way of tradition to make up, they are less well trained to associated or corporate action, they tend more to become victims of excessive sensibility, and they are in more imperative need of protection against monstrous fashions.

Teachers and games

To what extent teachers shall take part in games is a question that hardly admits of a satisfactory general answer. The quality and extent of interference must be determined chiefly by the age of the boys and girls concerned; the younger the pupils, the safer interference will be. But at all times it is pretty certain that the teacher should leave as much as possible of the organisation and administration of games to the boys or girls themselves; he should remain behind in such matters, as a court of final appeal and an occasional discreet monitor. Ostentatious supervision is always undesirable; it debilitates pupils and it adds quite unnecessarily to the duties and responsibilities of the teacher. But the lively interest of the master or mistress in school games is a most healthy influence. It shows the teacher to be human, it affords him a fine field for supplementary observation, it stimulates "loafers," and is a security for fairness. For all these reasons a teacher may take part in games, regard of course being had to the maintenance of a proper balance of weight in contests.

What games shall be preferred?

If there arises any question as to the kind of games that are to be preferred for school use, it will probably be found wise to consider principally three conditions; which games can be played in the open air; which can include the largest number of actual players; which cultivate the largest number of physical dexterities.

Let us remind ourselves that every free harmless movement having no conscious utilitarian object is play. Every one must have noticed the habitually loud voice of the healthy child; this is a natural and necessary gymnastic, and when it has to be controlled and coerced in the schoolroom into dove-like gentleness, something is lost which must be compensated in the playground. The play of the young has its exact counterpart in the work of art of the grown man; the child's play has no conscious end, the greatest works of art have no formulable "moral". And yet both play and works of art are the finest expressions of morality (or character) of child and man each in his sphere; and unless they conduce to healthiness, that is holiness, in its simplest and original sense, they are not merely unmoral but vicious. We may well, then, think equally seriously about our children's play and the things that delight ourselves in our maturity.

Play should be varied

We have seen that there can be too much imitation; perpetual repetition relaxes the power of control over the mechanism of nerve discharge; every now and then, therefore, processes must be varied and the capacity for initiation must be called upon to assert itself. Left to themselves, individual children should be constantly devising new play for themselves. The teacher's interference is wanted chiefly to suggest games in common, and to see that these are played fairly.

Inquisitiveness and Interest

Besides the spontaneity of action in the child and his tendency to imitation, both mechanical and imaginative or "make-believe," the wise teacher of the young will recognise also the child's desire to know, his inquisitiveness. The mischievousness that Satan is supposed to suggest is often truly the prompting of this most profitable of human instincts. It may be merely a variety of the inclination to get possession of things, to make them one's own. But in any case it is very distinctly serviceable. The teacher of children remarks furthermore that the individual child exhibits the tendency noticed amongst primitive or child-like people to be attracted by striking colours rather than being interested in forms. Every one knows how the infant turns to the light and, later on, grasps at bright-coloured things; this preference for colour is a valuable indication to the teacher as to the earliest means of interesting children and inducing them to reason. Colour is less abstract than form, and therefore it is an instrument of education available at an earlier stage.

Manual Instruction

It would be improper to conclude this part of our subject without some consideration of the place of manual training in school above the kindergarten age. Such instruction is warmly advocated by high authorities on several grounds, some of great importance.

The close relation of manual dexterity to early development is established beyond a doubt, and for young children of all grades and every status "sloyd" or the like seems to be essential. By its help not only does the brain develop better, but much is also gained by accustoming hands and eyes to work together merely as a preparation for those everyday duties in which an awkward man or woman is at a clear disadvantage. Furthermore, many a lad who would be helpless before the excessive bookishness of our school curriculum, who would pass and be classed as a dull fellow on his merits in relation to the ordinary work, discovers capacity and develops self-respect as soon as he is set to work in which his hands and his eyes have liberty of expression. For the best thing that education does is to give us the power of expressing ourselves.

Nor is it a small matter that prestige is given to manual work by inclusion in a Time Table, for this plants a respect for it in a boy's mind which no mere preaching of the dignity of labour can ever produce. The achievements which the actual experience of early life shows us to be difficult and honourable we appraise most truly when we are old. The contempt for physical labour is a kind of "priggishness" from which nothing but contact with labour will ever cure us; for the true mark of the "prig" is an inordinate and exclusive respect for the narrow range of things within his own experience and capacity. From the practical and industrial point of view this consideration is of great moment; for, as it is, we tend to attract people more and more from the manual to the clerkly arts, a profound misfortune for crafts and professions alike.

On the other hand, it should not be forgotten that manual training is of far more consequence for the primary and higher primary than for the secondary school; for those more certainly destined to industrial pursuits than for those who are to be organisers of industries and members of professions; for those whose games are few and rough and practised only for a short period and at rare intervals than for those whose training in skilled games is elaborate and continuous. Manual training seems to be essential to a proper primary course, and to be very useful as part of the curriculum of a secondary school.

The problem of interest which passes beyond the simple consideration of the use of the hands and eyes in early youth, is properly considered as discipline in instruction. Here we must be content with the proof that the training of the senses and the consequent employment of the tendencies to spontaneous activity are indispensable conditions for health, not merely bodily health, but mental and even moral health. And if we once make this point clear to ourselves, it will be easier for us to understand and to admit that the pupil, and therefore his education, must be considered as a whole. We get here into touch, not for the first time, with the doctrine of concentration or connectedness in education.

For the teacher must recognise in his pupil the coexistence and the need for the co-ordination of those three chief states of the mind which have already claimed some of our attention—feeling, knowing, and willing. The end of feeling is that we *are* something or in some desired condition. The end of the impulse to know is an understanding of the real relations between things; the truth, as we say. The end of willing is to do, or to make something.

The teacher uses movements to cultivate mental capacities

Now in furtherance of the pupil's health the good teacher uses these possibilities of the mind in conjunction with the unrestrainable impulses to movement in such a way as to make them all work together to a good result. Feelings are successively stimulated and regulated or repressed so as to induce the pupil to feel, find out, and to act in accordance with right reason. The child is to learn that he can be what he likes, know what he likes, and make what he likes—if he will only find out the way.

Psychological observation and difficulties

There has of late been a very great increase in the interest taken in the close and detailed study of childhood, and that on what are probably very good grounds. Psychology suffers the serious disadvantage of being in the main an introspective study. We learn about the operations of mind in general mostly by watching the operations of our own minds, and we may, of course, be systematically making observations that are vitiated from the first by our own inability to see ourselves without some sort of predispositions or prejudices. We see too often what we expect to see. One of us must think differently from every one and any one else, for the simple reason that he is himself and no one else. We may use precisely the same words, but the same words may have, nay, they must have, a different meaning to each several mind. It is possible, on the other hand, for me to learn a good deal by observing other people, and by comparing what I see in other people with what I know to be in my own mind; and by comparing notes again with others making similar observations, I can get some sort of rough agreement. But there are still difficulties. The normal man or woman or any child above infancy becomes self-conscious as soon as we begin our operations, and even at ordinary times the adult is a bundle of reserves and concealments. There are however many observations and experiments partly physical, partly psychological, that can be made without exciting excessive or irrelevant responsiveness on the part of those whom we are observing. We can, for instance, measure the extent of a man's responsiveness to touch or to sound by arranging with him standards and means, though even here the tension of self-consciousness may seriously interfere with the justness of our conclusions.

Pathological observations

Medical men very often draw their most valuable lessons from unusual or abnormal cases. They can judge best of the tendency of a disease by examining a case in which its operations have been unchecked. So the experimenter in psychology may learn most valuable facts from the observations of persons who are imperfect or undeveloped. It is not possible nor perhaps desirable for all of us to make investigations into cases of arrested or diseased development—imbeciles or idiots—but we have the developing man and woman with us eternally in the persons of the pupils in our schools. We can make observations on them because we have them with us for considerable periods and under circumstances that present them to us with reasonably frequent opportunities of finding them off their guard, and of making proper allowances for vigilant self-consciousness?

Observations are one thing, experiments another. To perform experiments safely and unerringly we must know a good deal by way of preliminary about the action of the nervous system, or we must at all events have the word of the physiologist for the justification of the inference that we are drawing. In the meantime the individual teacher can profitably make careful observations in detail. Remembering what has been said about the prior claim of observations tending to illustrate and confirm the relations which physiologists have proved to exist between physical and mental development, the young teacher gives himself excellent original practice by setting aside a page or two in a book to record the doings and inferred characteristics of each member of the class he meets regularly. By taking these preparatory steps he learns at least what are the facts that first strike himself as noteworthy, and he will forthwith endeavour to tabulate and explain them. He may then proceed to organise his investigations more systematically, perhaps adopting some of the schemes which have been propounded by such authorities as Dr. Warner or Professor G. Stanley Hall or Professor Sully.

For after the success of one's first endeavours to work out something for oneself, time is saved and rapid progress is made by finding out, from some one who has gone before, *what to look for.*

Professor Sully's list

Professor Sully once made an appeal for information as to specific errors in teaching, compiled, we may presume, by the teachers themselves. How good it would be for us (if we had the time) to record our own failures under such heads as he suggests;—

"Misjudgments as to children's previous knowledge and mental capacity, as seen in springing the unknown upon unprepared minds, assigning too easy or too difficult tasks, etc., (*b*) failure to recognise the natural forces and tendencies of the childish mind, as seen in their characteristic ways of imagining and reasoning, (*c*) inadequate recognition of the special lines of the children's interest and curiosity, and more generally errors arising from imperfect sympathy with child nature, (*d*) errors having their source in a slovenly and unintelligent handling of language, talking over children's heads, and so forth; (*e*) errors connected with questioning, such as telling children what might be brought out by questioning, and the converse error—putting unsuitable questions—and so forth; (*f*) errors dealing with the feelings of children, including mistaken appeals to them and equally mistaken neglect of them, (*g*) faults of government, discipline, mistaken attempts to correct and influence them".

It is clear that we may gain very distinct advantage out of such general and systematised study We may at least accumulate facts which sooner or later will be the basis of useful generalisation. Indeed some discoveries have already been made. For instance, we have learnt not only to detect great fatigue, but its early and otherwise unnoticed beginning. The tests of Dr. Warner are strictly of this character, though some call for a considerable knowledge of the nervous system before certitude can be attained.

Tests proposed

We might, perhaps, roughly divide the subject matter of our investigations into observations of conditions displaying themselves in clear bodily manifestations and observations of the more obscure phenomena not so obviously connected with the bodily health. Under the first head we can test children's touch, sight, hearing, breathing power, power of movement, general nerve power. The study of the power of touch, of skin sensibility, is of course often indispensable in the investigation of general defect of nerve power, and is one of the forms of observation that require, for great exactness, a considerable knowledge of physiology, delicate apparatus, and great acuteness and experience in the observer, but there are certain rough tests that any teacher may himself apply, as Dr. Bryan has shown in the United States Education reports of 1893-4.

For instance without any apparatus, we may secure useful results in this particular by touching a part of the child which he cannot see (the back of the head is suggested usually), and then requiring him in turn to touch the same spot. We may be able by this or other such tests combined with ordinary schoolroom experience to find out whether those whose sensitiveness of skin is least are also different from their comrades in other particulars.

After Touch, take Sight. We cannot of course, unless we are trained oculists, arrive at a knowledge of the cause and extent of visual imperfection in our pupils; but we can, by systematic tests, get valuable information and warning. Any one can learn to use a test-card in order to discover whether a pupil's vision is sufficiently near the normal to need no special attention in the arrangement of school work, places, and the like. There is always the black-board if we have no test-card.

Hearing in its turn can be judged by ordinary, we may say domestic, experiments, the ticking of a watch, or a whisper, the pupil of course being blindfolded and the watch being held nearer to one ear than to the other.

The Breathing tests help us often to the first hint as to general defect not of body only, but of mind. Perfect health requires that breath should usually be taken through the nose and that the inhalation should not stir the breast muscles alone. Any departure from the standard type, especially in young children, should at once put the parent and teacher on the watch. The Motor Test, or tests as to power of movement, include also observations on Balance and Postures. We begin by separating the obviously ill-balanced and defective-looking from the symmetrical; for when two sides of the body do not move alike, the difference is commonly due to the diminished force or energy of brain. We note what children are slower than others in obeying the word of command; we may even note, in examining individuals, the interval between command and obedience. Signs of brain action, says Dr. Warner, are best noticed in the movements of the digits rather than in the larger parts of the body; or in the behaviour of the mouth, the forehead, the eye-balls, the eyelids, and so on. The mouth should not twitch, the forehead should not corrugate or twitch spasmodically, the iris of the eye should contract when the eyes are exposed to sudden light; the eye should move easily (the head being rigid) in pursuit of a travelling object. If we can associate these with what we observe in the same children of inattentiveness, poor memory, weak power of reasoning, small will power (or wilfulness), violence of temper, and the like, we shall have made observations of the highest value, both to ourselves and our pupils. It is entirely true, as has been said already, that it is in young children that nerve-signs can be detected most frequently; there is less concealment about the very young, and, besides, the nervously unfit are to some degrees weeded out before they can come into schools for older children. But no teacher should be without some sort of physiological guidance to enable him to interpret the commoner signs of distress and defect. Every teacher should be able to recognise the point at which his pupils are physically incapable of benefiting by work in the schoolroom, when allowances should be made, and what conditions of food, warmth, light, sleep, air, and rest, are necessary for mental health and healthy effort. He may not be able to control all these, but he must do what he can, and he may always find it in his power to mitigate the evil effects of pernicious circumstances which he cannot entirely alter.

For reference :—Prof. James's *Principles of Psychology ;* younger students will find his briefer *Text-Book* more convenient. Dr. Warner's *The Study of Children.* Dr. Gowers in the *Journal of Education*, 1896, p. 408. Froebel's *Education of Man.* Herford's *Froebel*, vol. i. H. Courthope Bowen's *Froebel.* Dr. Dukes and Miss Welldon in *Teaching and Organisation.* Miss Dove in *Work and Play in Girls' Schools.* Prof. Sully in the *Journal of Education* of Feb. 1895. Miss Louch in the same volume. Dr. W. L. Bryan in *U.S. Reports*, vol. i., 1893-4. Dexter and Garlick's *Psychology in the Schoolroom.* Butler's *Meaning of Education.* Harris's *Psychologic Foundations of Education.* Prof. Lloyd Morgan's *Psychology for Teachers.* Baroness von Marenholz Bulow's *Child and Child Nature* in Miss Christie's translation.

CHAPTER IV

THE GENESIS OF CURRICULA

The education of youth . . . he looked upon as the greatest and most glorious work of a lawgiver.

— (Plutarch's *Lycurgus*, in Langhorne).

The importance of curriculum

It is not difficult for us, after all that has been said in previous chapters, to recognise the paramount importance of curriculum in education, though its importance lies less in the power possessed by the teacher to manipulate it than in its dependence on the opinions of society. The essential province of the teacher is Method; to a large extent he must take Curriculum as he finds it. Nevertheless, teachers of standing and influence may do much to modify conditions which are in the main imposed on them from without, and every teacher may follow curriculum in a more or less profitable manner.

Curriculum is important because it provides the main material, the main food, out of which are made mind and character. We cannot get equally good results from one set of studies as from another, any more than we can profit equally by different sorts of food. Some foods are more digestible than others, better fitted for assimilation by the body, more easily made into bone and muscle and nerve; so some studies, or some arrangements of studies, are better than others for building up mind and character. In fact, just as some foods are so wholesome that they "digest themselves," as we say, so some studies are so exactly the material which the growing mind craves for the purposes of further growth, that what is called Method, that is, artificial predigestion or presentation, is of distinctly smaller importance.

Curriculum in relation to the training of teachers and procedure in teaching

This fact is of the very highest moment when we are considering Method in relation to earlier and later studies, and in relation to the curriculum of the primary and secondary schools. Rules of arrangement and procedure, even correct and salutary rules, are not so important in an advanced stage of instruction, or in a series of studies which can be followed at reasonable leisure, as they are in a curriculum which is meant to do hastily the work which for proper maturing requires a long time. This should be remembered in administering systems designed for primary and secondary grades respectively; it is too often forgotten by over-zealous advocates of training for secondary teachers, who weaken an excellent case by failing to recognise the disciplinary merits of mere curriculum, and its relative independence of skilfulness in teaching.

The primary teacher is called upon to do in a woefully short time and with a therefore makeshift curriculum what the teacher using a genuine secondary course does in alliance with a sounder curriculum and with time itself, the most powerful of all agencies in education, lending a powerful hand on his side. It is therefore of infinitely greater importance that a teacher should be a cultivated and highly trained man if he is to serve in the primary grade than if his work is to deal with the more liberal material of the true secondary grade. It is really hardly too much to say that an inferior teacher may safely do work in the secondary school which in the primary school should be entrusted to none but the best. It is therefore quite reasonable to require, what indeed we find, that primary teachers should be, as a body, more skilful than others in the procedure of instruction.

Surroundings and atmosphere are as important as curriculum

The material we need for edification, in its truest sense, is not, indeed, provided by curriculum alone. Just as the body needs air and light, exercise and warmth, in order to make digestion possible, so too in education surroundings and atmosphere must be humane and cultivated, clean and bracing. The teacher cannot ensure this for his pupils at all times, when they are out of his sight and influence as well as when they are in the school. His own honesty, width, urbanity, and resourcefulness may indeed do something, and something of permanent value, just as he can open windows, let in light, insist on a clean school-room and so forth; but the main life of his pupils is not ordinarily lived under his eyes and his protection; it is not the teacher's influence that tends to be strongest in the process of moulding mind and making character.

The main point, however, to remember is that curriculum is a matter for most serious consideration because nothing can take its place. Some people have said, and even philosophers have asserted, that it matters little what we teach if only we teach it well. But we have seen enough already to know that this kind of treatment will not suit the human mind, for neither mind nor body can, to use Professor Laurie's words, be fed by a series of difficult exercises in digesting, but only by food which they can readily assimilate and digest. *Abeunt studia in mores.*

On the whole, this view is taken by society. The curricula of instruction embody to a large extent the opinion of the world as to *what matters* in education. It is hardly to be supposed that such opinion is entirely wise; some things are occasionally taught which hardly seem to serve a healthy spiritual end, just as, according to the writers on dietetics, the food with which we provide our bodies is not uniformly chosen with discretion. Neither the educational habits nor the dietetic habits of society have been thought out beyond the possibility of mistake in dealing with individuals.

Curriculum and Tradition

There is immense variety, and very probably we should be thankful for it. In both cases tradition is powerful; and tradition represents not habit alone, but also the uncodified experience of generations. But we are beginning to feel that we should profit by some endeavour to use a device not unknown to antiquity, as we shall see in chapter xi., and establish forms of curricula suited to definite public ends. Government does not yet prescribe our table diet, unless it has a special interest in our bodies, as when we are in the army or navy or in prison, or otherwise contributing directly to the convenience of the State. But in education all civilised countries have already some general official formulas, as in elementary "codes,' besides the special formulas for limited classes—army and navy, for instance—destined to special work. In Germany, where of all places in the world there is the most consistent and methodised effort to mould all individuals to a definite national end, there are unmistakable signs of the belief in the supreme importance of curriculum by the imposition of a definite course of studies as a test of military fitness, the ideal and aim of German education as officially conceived.

Two main tests seem from time to time to be applied in estimating the value of a "subject" in a curriculum. The first is whether or no a particular study tends to the good of existing social organisations. If a "subject" cannot be shown to do this, directly or indirectly, it has no proper claim, according to the principle assumed, to be admitted to the scheme of instruction.

Tests applied to "subjects".

The Civic Standard

The serious, and probably the fatal, objection to this view is that it sets up a standard which is civic and therefore provincial; it considers man as a citizen only; and the conception of citizenship is inevitably a restricted conception. Selfish rulers exploit it. They set up militarism, and honestly or dishonestly identify the interests of their own dynasty with the interests of the state and even the interests of morality and religion. Even where personal selfishness is apparently eliminated in favour of a more generous aim, such as, for instance, the greatest happiness of the greatest number, we still get a too utilitarian and therefore narrow view. By aiming at the greatest happiness of the greatest number, we may become the slaves of industrialism and commercialism, which are apt to see the final purpose of human activity in the production and distribution of a large number of "useful" things. In this way the area of individual freedom is contracted, and, in direct consequence, there follows a diminution of individual responsibility. For if the existence and prosperity of a society is our standard of propriety in education, we are driven to a narrow conception of individual power and worth, to unmoral standards of duty (as "patriotism" in its most restricted sense), and all sorts of perversions of conscientiousness. It is easy to see the mote in our neighbours' eyes, so Germany and France together are excellent object-lessons. The beam in our own eye is the now fashionable conception of industrial or commercial success as the guiding light in education.

The danger of the commercial standard

The truth may be that England has become strong in industry exactly because she has never consciously set up the commercial or industrial standard in education *by educating her sons through specific curriculum for commerce and industry.* If she has set up any standard at all, it has been manifested in the conservation of liberal subjects of study that do not "pay," and in the free scope given to individuals, unaided and undirected by excessive state intervention, to conquer and possess. It is, indeed, just because she is not a commercial nation, a nation of shopkeepers, that she is going to school to Germany, where the civic conception of duty is now the traditional and official formula. Commercialism is, indeed, the humaner side of modern militarism. The rulers have sacrificed much to military organisation and aims; it is to be hoped that they are doing more wisely in their cult of commercialism.

The civic standard in education might indeed be accepted at once if we were agreed about the tests and conditions of admission to the greatest of all states, the *Civitas Dei*. But all our ideas of citizenship are relative to our imperfect humanity. Even the military standard of citizenship, even devotion to a particular dynasty, have at times been set up in Christian countries as the essence of the duty owing to God, and there is a perennial tendency to identify organisations manifestly temporal, so long as they contribute to present order, with the Kingdom of God.

The cultivation of character

The second great test of propriety in education is the effect which a study or series of studies may have on the cultivation of the individual will. I want to make my pupils willing and able to find out truth and to do what is right, by whatever test they are led to discriminate. I suggest some tests—

a true teacher will never lack them—and I strengthen mind and character by examples and exercise. This assumes that there is a common goodness, attainable by all, not confined to a caste, a sect, or set; not different for different people; a spiritual equality. This seems to be the true lesson of all real religion, certainly of Semitic religion; and I believe it to be the keynote of real education.

What is good for anybody is good for everybody; and if the world were what it should be, this would, of course, result in a common curriculum. But such a condition of things is not good for existing corporations, for vested interests; and therefore a common curriculum will long be resisted by all the forces of both healthy and unhealthy conservatism—very possibly a most salutary provision of Providence, a stage through which mankind must necessarily pass. But this consideration ought certainly to remind us that existing corporations—army, industrial societies, and even kingdoms—may rest on an unmoral basis, and are not final facts in civilisation.

So far, then, as the teacher is concerned in the training of youth, it would seem to be desirable that, to pursue his work intelligently, he should be guided by a desire to cultivate character without reference to a civic standard. In cultivating the desire to know the truth and to do right, be sure we are bringing the Kingdom of God nearer to accomplishment But having satisfied ourselves what our scheme of studies is to aim at, the good of the state or the moral development of individuals, why should we arrange our studies in definite sequence? For these reasons: first, we must have regard to the gradual growth of mind, or else our work will be futile because confusing; we must, in fact, consider the Pupil. Secondly,

A definite sequence of studies is necessary we must keep in view the existing body of human knowledge; we must, in fact, consider the Matter of instruction, and its use as mental food and gymnastics. Thirdly, we must not throw aside the experience of generations; we must respect Tradition.

Our plan should consider, first, what each age and stage of school-life can compass; secondly, what chief divisions of knowledge claim recognition; thirdly, what places have been established for themselves by current studies.

Tradition limps behind discovery

Certain preliminary considerations help a good deal to clear away obstacles. For instance, mere prescription or tradition is sure to be "behind the times" in details, but it represents in its entirety the largest available body of solid and safe guidance; it is accumulated wisdom. It is always a kind of triangular compromise between (1) the parent, representing the world, (2) the preaching and teaching of great men, reformers, innovators, and (3) the teacher. To be sure, a system of education ought properly to be a harmony, not a compromise; and if the science of education were truly and fully developed, this harmony would have been satisfactorily established. But common-sense tells us, in the meantime, to live and let live. We should—nay, we must—give and take in matters of education as in matters of politics. Neither education nor politics is yet an exact science.

The common divisions of knowledge are logical, not psychological

We are guided, in the second place, by the remembrance that the current divisions of human knowledge are logical, not psychological, divisions. They grow out of one another logically, one providing *data* or material for the next in order, which starts where the other leaves off; but they do not conform in order of intelligibility to what we know of the stages of mind-growth.

Metaphysics may be said to provide *data* for logic; but we teach logic first, taking the metaphysical bases as proven. Mechanics, chemistry, and biology provide *data* for natural history; but we begin, in teaching, with the last.

The growth of mind proceeds in a fairly well established order, but the objective sciences are continually subject to rearrangement consequent on great general discoveries. The early physiology was a theory of "humours"; the theory of evolution upset all the hierarchy of sciences; the discovery of gravitation placed mechanics in a commanding position; physiology itself may be only a branch of mechanics; and heaven only knows what rearrangement of the pyramid of sciences may result from bacteriology. But minds grow in an order tolerably well ascertained, so that in settling mere curriculum the teacher derives from psychology much more useful guidance than from logic and metaphysics, which may, indeed, lead him far astray.

In selecting studies, consider (1) Psychology, (2) Logic, (3) Tradition

The teacher therefore selects studies firstly with due regard to the progressive growth of mind. He selects studies, secondly, with due regard to their architectonic or edifying quality, their generality, their bearing on a large area of life and experience, their fruitfulness in making subsidiary studies easy. He selects studies, thirdly, with due respect to tradition.

The last point is one of some importance, for curricula tend in time to become institutions, they fix themselves so firmly. The environment which will make them applicable is, so to speak, established and in waiting for them. They are therefore adopted by people without question or demur. We know them; and we know, or seem to know, their use. They are bound up with history; they have always been taught more or less. They have their own history; they have been taught in various ways because they have been adapted to various ends.

The traditional stages of curricula

The more primitive the conditions of life and of outlook, the simpler are the materials and the methods of education. If we could imagine any time at which individuals lived in isolation, there could be no education imaginable, for education implies at least human companionship. But the first imaginable and, indeed, recorded state of mankind, is that in which the Family is the unit, when the father is the head and (with the mother no doubt) the teacher of useful arts. This is a simple, primitive, predatory stage. Then the State emerges. The father is still the head of the family, but duty is imposed and measured by the needs of the City; family no longer preys on family. Such is the earliest recorded condition of Greece and Rome. Families are here combined for warlike purposes. Very soon differentiation begins, the warlike individuals being separated from the unwarlike. Then the peremptory claims of the state are questioned; they are broadened by the discovery of new arts necessary for its life—industry, commerce. A quicker process of differentiation begins. Then comes competition, and with it more marked process of differentiation. With the growth of population it becomes increasingly difficult to assign definite spheres to so many individuals; differences of individual development become more manifest with the creation of a larger number of complicated functions. Into this chaos comes the religious conception of equality before God, individual responsibility and worth, individual rights. It is this religious conception of individual responsibility and worth that imposes on us the double duty of both providing sufficient opportunity for each individual and also of preventing such excessive specialisation as will destroy the general balance of character and development. Equality before God is the bond and standard and guarantee of a justly constituted human society, and therefore of a humane education.

People sort themselves according to Opportunity for finding niches in institutions, and Capacity for doing something there well

As a matter of fact, individuals tend to sort themselves, first, according to their Opportunities, such accidents as birth, status, upbringing, and so forth, and secondly, according to their Capacities, that is, what they can do best. Or, to put the case somewhat differently, they fall into their rank, first, according as they have had means for securing themselves permanent places in institutions, in social organisations established for the discharge of corporate functions—the Church, law, commerce, army, navy, and the like—and secondly by the growing necessity, under the pressure of the minute division of labour, that each man should do something particularly well.

The liberal studies best prepare men for places in institutions

And observe the influence of these conditions on educational curricula. The great social institutions, the organisations which mark man as man are just those activities for which the best preparation is found in the more "liberal" studies, that is, the studies of greatest generality: language, history, mathematics, science; and even poetry and music, which are great bonds of union. It is very natural therefore that people should expect the "professional" men to have had a good "general" or "liberal" education. After these come the special studies, the studies of special arts and sciences, which though valuable for the use of man, are not indispensable as bonds of social comprehension and union. This is the sphere of "technical" studies. There is, of course, a certain amount of overlapping in the two classes, and it is conceivable that what in one age and place is regarded as a "liberal" study may become "technical" in another, and *vice versâ*. Thus in England the use of arms was once a necessary part of the equipment of every liberally educated man, and it is so still in many countries. Again, new arts may be discovered of such general bearing on life that they may pass from the rank of technical to that of liberal studies; thus already there are signs that drawing and painting are achieving this promotion in public opinion and therefore in the opinion of those who construct curricula.

It is the business of the statesman so to contrive political conditions that equal opportunities are given to all, or, at any rate, to as many people as possible. It is the business of the teacher so to cultivate the aptitudes of his pupils that they may use fairly and fully all the opportunities provided.

The limitations of the statesman's power

The statesman's power is limited in two chief ways. First, by the imperfect economical organisation of society. The distributing agencies are not capable of giving each individual the means which he needs for perfect development. Wealth tends to concentrate itself in comparatively few hands. Secondly, there is a strong general disinclination to disturb existing arrangements This conservatism is by no means necessarily or generally selfish, though it sometimes is certainly open to that reproach. It is probably a useful safeguard against the violent interruption of steadiness in social evolution.

In the meantime it is clear that education can do its very best for a minority only, if even for a minority;

and our working theory of what constitutes a liberal education must be a compromise between an ideal, that which would develop every side of human nature completely and harmoniously, and the practicable, that which is the best available under the circumstances. The teacher, as such, must satisfy himself chiefly with the latter, keeping his eye on the first for guidance when opportunity offers.

Traditional divisions of curriculum

The traditional division of education, as a process, was in three stages: the preparatory, the liberal, the special. In the preparatory stage were taught the instrumental, ancillary, or conventional subjects, the keys to what were to follow. Such subjects were Reading, Writing, the elements of Calculation; the "three R's," as they were called. In the liberal stage were comprised the studies which were regarded as cultivating all the greater (that is, the more general) aptitudes, mathematics, languages, and the like; the field of knowledge concerned with man as man, history and literature and so on. In the special stage were taught the things directly necessary for the purpose of gaining a livelihood Large masses of our contemporaries have been starved on the first and the last, a bad combination.

The popular division

A more fruitful and popular division of studies gives us two main classes, "human" and "real". The humanistic studies are those which cultivate human feeling and a sense of human continuity Such studies are literature with language as literature, history, philosophy, and religion. The realistic studies are those which cultivate the knowledge of outer nature and enable us to discover its laws Such studies are geography and allied subjects, "science" generally so called, applied mathematics, and the like. Outside these, but with some affinities to the first class, are the arts of refined appreciation and expression: music, drawing, languages as speech, and the like.

A liberal education is essentially preparatory

Whatever theoretical division of studies may be adopted, we certainly ought to do what we can to exclude from a liberal education, or at all events from that part of education which we consider the liberal part, pressing considerations of livelihood-earning. Thus, to teach language as literature and language as (say) commercial correspondence are two different things. We must make up our minds that the general side of the liberal training is the important side, although, as the doctrine of Interest teaches us, it is quite legitimate and even occasionally necessary to show the bearing of the more general studies on the problems of practical life *A liberal education is in its essence preparatory and always incomplete.* It is meant to make the pupil receptive, appreciative, capable of indefinite growth. It must be placid; it must not introduce, as definite "bread-studies" do, elements of fear and unrest, which indeed, would be *propter vitam vivendi perdere causas.*

The prolongation of youth

One of the indubitable marks of progressive civilisation is the gradual extension of the conception of immaturity. Inferior animals mature rapidly; man takes longer to reach his full growth. Yet youth, as shown elsewhere, was in former generations, even amongst cultivated English people, conceived as a short and regrettable stage, which should be compulsorily closed as early as possible. Children of well-to-do and well-bred parents were stuffed with all the learning they could hold, and girls were women of the world at fourteen. Even now, in our own age and country, mere children of some ranks have to take upon themselves the responsibilities of adult life, toiling, earning daily bread, even marrying. But enlightened people defer the working age till adolescence is passed; and the heroes and heroines of modern fiction are older than those of a generation ago. Those of us that can afford it keep our boys and girls at school until they are nineteen, twenty, twenty-one; and the heroines of the novelists of to-day are usually nearer twenty-six years of age than sixteen.

A "liberal" education, then, will usually cover adolescent life at least until the end of the nineteenth year; whatever we do within a more contracted period must be a make-shift. To this the teacher must, for this generation at all events, reconcile himself.

Three modifications of the ideal curriculum

We come then to this: that the test of the claim of a "subject" to a place in the school course is its relation to a liberal education and the time available for its use. We must, in consequence, recognise here and now, three common modifications of an ideal curriculum: we must have one for pupils who leave school from eleven to fourteen years of age, one for those who leave from fourteen to sixteen, and a third for those who leave between sixteen and nineteen. The first class leaves school for the work of life in shackles; it can receive but an apology for education; the bulk of its acquisitions must be the mere instrumental or ancillary subjects: reading, writing, and some calculation—all liable to pass away from disuse. The second class can secure at least the working elements of a liberal education. The third can certainly get all that its stage of development needs.

A school education completed at twelve or thirteen cannot be regarded as a satisfactory "liberal" education. At its best it must be inadequate. It must depend largely on the training of the sensations and feelings, and very little on the training of the powers of reflection, which are then very weak. The teaching must be mainly instruction in the instrumental subjects, and as these lack inherent interest, the learning must be often against the grain. Again, the senses may be adequately cultivated, but if pupils' homes are not good, there is inevitable perversion of emotions; and the children are not long enough at school, *ex hypothesi*, to gain the necessary steadiness there. Moreover, the exclusive or ill-proportioned training of the senses and powers of observation is apt to produce dulness and to make mental processes mechanical. When attention is directed mainly to things which stir little interest—spelling, mechanical reading, the routine processes of arithmetic, formal grammar—the effort is made more unpleasant than it would be if these exercises were deferred or insinuated or spread out almost imperceptibly in a longer course. Little room is left for the discursive powers, for initiative, for self-help; and this is all the worse when conditions and, it must be added, prejudice, prevent the use of "home-lessons".

And yet the developments of modern life and inevitable political progress make it more and more necessary that a larger number of persons should have this liberal training, inasmuch as political and social conditions place legislative power on an increasingly democratic basis, whether we like it or not; influential leaders of opinion and even administrators emerge from ranks which have rarely heretofore supplied them.

It is most important that the active imaginations and emotions of children condemned to an imperfectly liberal education should be used to their utmost extent in order to stir up admiration for the right things, for beautiful things in nature, for greatness and goodness in historical or fictitious character. In the primary grade we must needs also appeal more directly and more often to the utilitarian sense than we should in another grade. It is a settled principle in education that we should use the pupils' ideal as an allurement to effort. Children of the lower social rank naturally look upon wage-earning as the most desirable of all conditions; they know and understand before their time the pressure of the struggle for life. We are forced to take advantage of this knowledge, and get them to feel that mastery of the school subjects is translatable into more shillings per week as wages.

Substitutes for liberal education in the primary grade

Note, now, the richer opportunity of the secondary teacher. He need not—nay, he must not—weary his class with formal studies. He need trouble himself less about spelling, for his pupils are likelier to learn that art in the natural and easiest way, by reading. In arithmetic, accuracy and rapidity of work are of less consequence than such a mastery of principles as enables the class to proceed quickly to algebra and geometry. Analytical or formal grammar may be set aside for more genuine study of language as literature, both for its own sake, and as an instrument of progress in other directions.

The advantages of the secondary teacher's syllabus

Again, the secondary teacher can more surely develop his pupils' humaner side, planting their sympathies and knowledge both deeper in the past and with a wider hold over the present by means of history and language, ancient as well as modern, foreign as well as native. In dealing with nature or scientific studies, he can more effectually stimulate and satisfy the desire to know because he has more time for experiment and illustration, and, again, can cover a more varied ground and cover it more logically. He can count, too, with somewhat less doubt, though not always with certainty, on more humanising home influences. To live in cramped and often sordid surroundings is itself an obstacle to reasonable human development. Those who live hard lives grow callous. It is easy to be virtuous, as Becky Sharp says, on two thousand a year.

And finally, the secondary teacher can usually count on his pupils' possessing a greater range of ideas than the children in the "elementary" grade. They travel more; see more people, more books and newspapers. Their minds therefore present more points of attraction, so to speak, for other ideas, are easier to move to reflection and acquisition.

The teacher's power of choice is limited

If we look a little more closely into the nature of the machinery by which a subject is admitted into a curriculum, we may more exactly ascertain the teacher's power of determination. Such questions are mostly decided for him by others: by the state, by the influence of individual parents; by bodies constituted for the purpose of organising and conducting examinations. The state is practically supreme in the primary sphere, a fact which need surprise no one who examines the historical and economic circumstances which have called for the state's interference. It prescribes both curriculum and tests, though there is much evidence of gradual relaxation. In the secondary sphere the state imposes no direct general test, and therefore prescribes no authoritative set of subjects; but it exercises very powerful influence on curricula indirectly. The Science and Art Department, the Civil Service Commission, the

In the primary sphere, by the state

In the secondary sphere, by the state

Charity Commission, each in its sphere works to this end, but on no common principle. The consequent diversity may be salutary; there may be very good reasons for objecting to such a uniformity as is produced (say) in Germany by state examinations, determined, as they are by military and dynastic considerations.

By parents

Individual parents demand this teaching and that, moved partly by fashion, and partly by utilitarian ends of their own. They may wish, for instance, their sons to enter a particular kind of business.

By examining corporations

Corporate examining agencies, of which the universities are the greatest, do a good deal to maintain a tradition of liberal education. But they are perpetually diverted by the claims of utilitarianism, and they tend to impose not alone uniformity of aim, but uniformity of method, too, by the necessarily uniform standard and manner of examination which it is their boast to maintain. A system of examination of course produces a system of teaching, or, it may be, of "cramming" which will secure the best results, and the tricks that prosper will soon become known generally.

A teacher's power of determining both aim and method will always be less than it should be, so long as he is not as a matter of course associated in examinations with the "external" examiner. In England (as in China) there is a monstrous fear lest the teacher should take part in the examining of his pupil, and the consequence is not merely that justice is in peril, but also that method, the teacher's peculiar province, is largely determined for him by some one else, and his proper influence in the eyes of his pupils as their highest guide is gravely weakened. Many a fine teacher has failed to exercise his due influence over his pupils because he has not worked them for examination, and examining bodies are sometimes disastrously out of touch with those whom they examine.

(For references, see list at end of next chapter.)

CHAPTER V

THE MANIPULATION OF CURRICULA

Will you play upon this pipe?—Hamlet.

IT is clear that under ordinary circumstances the teacher must content himself with making the most profitable combinations of subjects which the prescribed curriculum permits, teaching these as wisely as he can. As a citizen he can and must do his best to influence public opinion to listen less to specialists in "subjects" and more to experts in education—not mere experts in pedagogy, but to those who understand the sociology of pedagogy—yet he cannot expect, nor should he, that "the public" will ever place itself unreservedly in professional hands, for reasons already sufficiently explained.

The teacher must compromise

With his possible curriculum in front of him, the practical teacher, having made up his mind what effect he wishes to produce, is guided chiefly by two considerations: the principle of economy or parsimony, and the principle of fitness. He asks himself first, how little will suffice, not how much he can include. Not, indeed, that he excludes this or that branch from treatment in school, but that he contrives his teaching to be inclusive of much that unskilful teachers, organisers, and administrators regard so unintelligently as separate "provinces" in the kingdom of knowledge, such as "ancient" and "modern"

The principles of economy and fitness

history, "political" and "physical" geography, arithmetic and algebra, "drawing" and "shading," and so forth, in a score more formal distinctions, which, of course, can be multiplied by every one of the ever-growing swarm of specialists. He will teach History, Geography, Mathematics, Drawing, as wholes; and all together as one. His unintelligent brother will teach them in snippets and arbitrary divisions devised by the official hierophants of the sciences or the organising bureaucracy, but quite unknown to the nature of things. His pupils will be kept in a perpetual childhood, floundering about in search of a woefully misunderstood accuracy, exactness, thoroughness, and what not; never seeing the forest for the trees. True economy consists not in leaving out "subjects," so called, but in leaving out irrelevant matter. To the young pupil an infinity of dates is irrelevant matter; so is a gazetteer-knowledge of geography; so are the exceptions in French, Latin, Greek, and German grammar; so is a knowledge of tare and tret and stocks and shares. "If in doubt, leave out." It is easier to kill immature intelligence by too much than by too little, satiety is worse than incompleteness. "Interest," says the wise Dr. Rein, "depends not on quantity but quality."

After economy comes the principle of fitness, which demands consideration of the age, antecedents, and environment of pupils. It would be impossible to outline here the multitude of schemes which by permutation and combination would be best for all sets of pupils, we can only sketch faintly the sort of development which an average ordinary course permits.

A skeleton course

Up to seven years of age books are of less consequence than other means of encouraging intellectual activity. At this period there is a close and even definable connexion between the bodily growth and intellectual development. Such procedure as the sensibly organised kindergarten encourages, is needed to stimulate and co-ordinate the powers of making and of learning by efforts originating from within the child himself. The mechanical memory is very strong at this period, and so long as it is exercised without too prolonged a strain, it is not easy to overload it. But its achievements soon pass away, because they are not the objects of reflection.

From seven to nine the power of rational acquisition is growing. The child tries to understand. He is still full of undisciplined fancy, and is sensitive chiefly to physical pleasure and pain. Accuracy and a sense of duty are at this stage best taught not in the class-room but in the playground. Excessive detail in this stage is mere loss; excessive "observation" prolongs the purely empirical stage of intellectual effort. Reading aloud; the use of simple tools; geography on a big scale, with some general knowledge of the atlas, of shape rather than names; how to tell the parts of speech, as Dr. Abbott prescribes; how to tell the parts of a sentence, according to Mr. Somervell's procedure; concrete arithmetic and a little practical geometry; the elements of speech in one foreign language—these must be the bulk of the work done.

From nine to twelve, lessons may be gradually lengthened, though it should be always remembered that it is safer to occupy too little time in study than too much. This is the age of object lessons, but not yet of experimental science, for the simple reason that the pupil's reasoning would be not imperfect only, but even erroneous; he cannot yet conceive the conditions of legitimate inference.

From twelve to fourteen we throw a boy more on his own resources. He may have home work as well as work in class. He may begin to read a foreign book at school, but as a book to be read, not studied. He learns how to keep a note-book His drawing becomes more exact—maps and models He still has object lessons in natural history, but he may be introduced to the beginnings of experimental science, not by merely watching a teacher, but by doing things himself. He reads much by himself, miscellaneously, among good books

From fourteen to sixteen is the stage during which English grammar is to be entirely dropped, and Rhetoric substituted. With French, the boy now reads also Latin or German, or even both Natural history passes into a preponderating experimental science It becomes more necessary now to give real preparation work to be done at home, not merely repetition of school work, but something to find out either by physical experiment or by the use of books of reference, gazetteers and dictionaries

From sixteen to eighteen it is important to increase the amount of work done by the boy himself, the master guiding and correcting The taking of notes and making of abstracts of books should be taught as a definite part of education. It is not desirable yet to drop all the "real" studies or all the "humanistic" by premature specialisation, but the bulk of the one or the other may be lessened in view of the now clearly discovered bent of the pupil's mind Just at the end of this period an admirable effect is produced on general studies by a little training in formal logic The knowledge of the simple conditions of valid proof will provide a boy with a principle of intellectual steadiness for all time

The necessity for concentration or connectedness in studies should be pretty obvious. Things that are not related to one another in our minds by some rational association are likely enough to pass away and be lost to memory, and finally fade away so entirely as to be irrecoverable. If what we learn is merely a string of accidents, then what we retain is at best rote-work. If, for instance, we learn lists of the manufactures that flourish in a country and lists of its chief physical characteristics, without associating the two as effect and cause, the ideas lie in our consciousness side by side only by accident, and our knowledge lacks life; it is not only incoherent, but also incapable of seizing other items of knowledge and relating them in their turn to ideas already appropriated or yet to come within reach. Thus if we possess the two sets of ideas already mentioned in causal relation, we find it easy to apprehend the facts of historical development connected with them. Towns grow up and a country has a history because of, amongst other things, the industries and occupations which arise from its geography. We ought therefore to do what we can to co-ordinate studies. We can best make new ideas clear by connecting them with the older ones. Again, most people are open to lively impressions on some special side; they are attracted by some branch of knowledge or practice more than by others. The educator, then, ought to find this out in each case; or at all events so to link the facts of the curriculum to one another that there may be a hook to catch every pupil somewhere. For instance, history and historical grammar; geology, geography, and thence history; these and an indefinite number of combinations may be made, starting from some one of them.

Connectedness

Thirdly, unity and consistency of thought and of intellectual life is a mark of mental health. Unified knowledge is science. The more points of rational connexion there are between our ideas, the more knowledge are we said to have, the better we understand the world. If we understood any one thing in *all its relations*, we should be omniscient.

> Flower in the crannied wall,
> I pluck you out of the crannies;
> Hold you here, root and all, in my hand,
> Little flower—but if I could understand
> What you are, root and all, and all in all,
> I should know what God and man is.

It is a sign of health to want to connect the new and the old, and the teacher is to blame if he does not get a pupil to feel the value of learning a particular "subject". The teacher ought certainly, in dealing with pupils of a reflecting age, to make them see the purpose of one study by means of a comprehension of its relations either to others or to immediate application

We must, fourthly, concentrate and connect so as to save effort in details. Hasty persons take the most pains, and make the least speed, they work without concentration. It is clear that if we allow our subjects to overlap without illustrating one another, or if we crowd our curriculum with subsidiary studies and neglect those that are fundamental, we are spendthrifts of time and endeavour. And this is what is assuredly brought on us by a congested curriculum.

An extended curriculum

On the other hand, the same considerations that warn us against the congestion of studies supply arguments for a curriculum extended as widely as time will permit. For the more things we learn in connexion, the better we understand each; and it is probably true that the fault of existing schemes is not, in the main, excess in the number of subjects taught but rather a wasteful lack of co-ordination. We could carry greater weight if we packed better.

Of course all good teachers have endeavoured, time out of mind, to excite and keep up the interest of their pupils in their studies. But it is important to remember that the interest required is not the sort of inducement which is represented by the rubbing of honey round the rim of the cup of medicine. It is rather the pupil's lively desire and readiness to link the new fact to its fellow in the regiment of the old facts established in his mind.

Concentration sequence and connexion

The great apostles of "concentration" technically so called have laid down in setting forth their curriculum the need for securing both a vertical or psychological sequence of studies in the life of learners, and also a horizontal or logical connexion of studies or topics, so that what is related in fact may be related also in the learner's mind. But the endeavour to unite the psychological and logical plan in this way is not always successful.

We are all agreed as to the need for a proper sequence of studies, but errors are easily made in practice. Few people would make the mistake of setting forth subjects to young learners in the pyramidal rather than the psychological order. We know well, for instance, that our labour would be lost if we talked to them ever so learnedly about protoplasm, though it is a fundamental conception of biology. But a young learner, a child, is at once interested in a live animal and its ways. In fact, the order of ideas as they exist in analytical hierarchy is not the order in which it is best to present them to the young. We must not expect them to apprehend the last results of our painful analyses. Hence the injunction to begin in *most* of our teaching with the particular, rather than the general. When therefore we arrange a curriculum we must appeal in the early stages to the personal interest of children in life, their delight in broad colouring, strong situations and heroic acts, not in articulations, mechanism, and subtle characteristics; for literature or history, to their interest in striking personalities, not constitutional law and political philosophy; for natural history and science, not to protoplasm and cells and other fundamentals of biology, but to the lively animal which they know.

The theory which lays it down that there should be a vertical sequence in studies, has of course been acted on by good teachers, more or less, at all times; for they have endeavoured to make one subject prepare for another, or at all events to illustrate it. It is naturally easiest to carry it into effect with very young children, whose tender age necessitates a very simple curriculum. The teacher, for instance, gives a lesson on birds' nests; then sets the children to draw birds' nests under various conditions; then asks them to write down or tell what they know about birds' nests, or narrate tales about them.

But besides a vertical sequence of subjects, there must also be a horizontal connexion of topics. Allied subjects must be linked together, the objective being transformed in what appears to be nature's order, to subjective, in the learning mind. The connexion, according to the strictest gospel, is to be in the form of concentration round a "core," and this "core" is to be history. History is to be taken in epochs, and round each epoch other studies are to be clustered—geography, literature, mathematics, and so forth. Each is to illustrate the others, or at least to illustrate the history epoch adopted.

Objections to the strictest plan of sequence and concentration

The main objections to this plan of sequence and concentration may be thus summarised. To begin with, it would appear, after all, to construct a curriculum on analytical grounds rather than psychological. The adult looks round and sees, not what does, but what he thinks ought to, interest the pupil, and so constructs his system. Secondly, the plan affects to base the order of studies on the order of the development of a people or mankind in civilisation, though the analogy drawn is certainly not yet close enough to justify, on grounds of logic, any very far-reaching inference, for this one reason if for no other—that the child in civilisation inherits tendencies, which the race in its corresponding stage did not. Again, we have no right to assume that either a people, even the German or English or American people, or that mankind itself, has completed its passage through all stages up to final maturity ; it may still be in the infant or youthful or adolescent stage , whereas we do know the beginning, middle, and ripe end of contemporary individual human development. The fourth objection is even weightier. The course proposed should at least last up to the arrival of the adult term of development, whereas the authorised programme of the theory gives the pupil his last lesson in his fourteenth year. Fifthly, the use of history as the nucleus or core of studies leads to a violation of psychological law We are driven to the use of types, and types are very difficult for children to comprehend. It is useless to expect a child to understand that the history of the patriarchs is typical of pastoral life, the history of the kings of Israel typical of ordered government, and so forth.

We are driven then, as teachers, to content ourselves with such careful manipulation of our time table as lies in our power. We must provide as well as we can for the three great working branches of education already set forth. We must provide the right proportion of time for each study in relation to its importance in our eyes. We must fit the material that we employ to the age of the class, giving it what it can digest in appropriate form. We must call for less continuous effort from younger than from older children. We must try to put the heaviest work earliest in the day, when the brain and body are best able to sustain fatigue.

What the teacher can do

Perhaps the most important reform needed by our common school system is some plan which would limit the actual school hours in relation to age. A young child ought not to be under constraint, even the mild constraint of the true Kindergarten, for so much as a whole morning. But the school time has been determined by tradition ; our practice is partly a survival of the long-standing view which regarded the child as capable of endless learning and saturation, and partly the result of the parent's wish to get him out of the way —a wish which reflects less discredit on the poor than on the well-to-do, who have the means of serving their children's permanent interests and yet neglect them. Experience and experiment have both shown that the shorter hours are the more profitable. The time required for mental digestion, during which there should be no thought of teaching or directed mental activity, is longer in the case of the child than in the case of the youth, and in the case of the youth than in the case of the adolescent. At all times, but particularly in early life, a class that is being perpetually taught has no time to learn. Our little children would often benefit more by being turned loose in the playground, or even in the school-room, than by

Short hours

the most constant pseudo-Socratic use of the pseudo-Socratic "method".

"Grades" and Curriculum

The relation of "grades" to one another, and the possible bifurcations of curriculum depend on what has been already set forth So far, no one has discovered a curriculum for the primary school which shall be both complete in itself and shall also form the natural basis for work in a secondary stage. That is, if a pupil moves from the primary grade to the secondary, he must in great measure start afresh Work is different in many important respects from the first for children whose school life terminates at different periods.

The education of the poorest children is at once fuller and more meagre than that of others. We must remember once more that the radiating centre of training is the home. But the poorest children are most at home in the street, and here they get a training in practical life and in devices for which the more favoured children have to wait a much longer time. On the other hand, they see less of books and of those leisured employments which even in unrefined homes soften manners School-life for such children, and even for those of the artisan class, will from the first be more "practical". It will be more immediately utilitarian. It cannot afford the longer process of letting-alone which is so necessary for fuller development. Their shorter course must fit them out at once for earning a livelihood. The school atmosphere must be attractive, even seductive, to a degree not by any means so needful in the case of those who have better chances of wholesome pleasure in other places. How little real gaiety the children of the poor enjoy is astonishing, and we must therefore particularly exclude from the school all uncheerful topics and associations. The primary school cannot be made too bright.

The curriculum must be more synthetical than analytical throughout. These children more than all others must learn to *do*, to *put together*, to *speak*.

Bifurcation in the secondary grade

Bifurcation at the age of sixteen or seventeen opens out a new set of difficulties." Here too, the difficulty turns upon the necessity that presses on some pupils to prepare for their special work, that is, for the work of their livelihood, before their liberal education is complete. The point is treated very fully by Mr. Glazebrook in *Teaching and Organisation*, but we may note here that the main points of differentiation are, first, the postponement of Latin, so that it need not be taken up at all by those who are to pursue a purely commercial career, and, secondly, an increase of the time given to applied sciences and modern languages.

Permutations and combinations within these limits are endless. But two remarks may be made. The entire exclusion of Latin is a serious matter, even when a school course is completed at the end of the sixteenth year. If Latin were more rationally taught, that is, less analytically from the first, it might be made to do real service even by then And by the end of the sixteenth year, if teaching has been real, a boy should be able to read and speak at least one foreign language quite well enough to make a good start in "business".

Girls' schools and girls' curricula

The secondary schools for girls have certain great advantages over those of boys. First of all, if they have no tradition to guide them, they have also no tradition to hamper them; and the field of their operations has been, compared with that of boys' schools, comparatively unencumbered by precedent. They have been freer to compose their curriculum on sound lines. In the next place, in spite of all that has been done to open out, very properly, new spheres of activity for women, women's functions are far less diversified than those of men; and therefore the curricula drawn up for them present fewer difficulties in the way of reconciling the claims of formative or general studies with the special studies preparing for the getting of a livelihood. The curricula of girls' schools may therefore be expected to be more liberal than those of boys' schools of a corresponding type.

In girls' schools, therefore, we are not called upon to consider the necessity of preparing pupils for a multitude of different avocations; we can give greater weight to the studies that bear rather upon life than upon livelihood; our training can be more truly an "all-round" training. Home life is the truest and most real part of life.

But schools must have some principle of classification.

Mrs. Bryant's principle of classification

Some girls are so much better prepared than others in early years; and girls differ, too, so very widely in physical and intellectual vigour. Authorities tell us that there is far more uniformity among boys than among girls.

The classification, then, seems naturally, as Mrs. Bryant lays it down, to be simply a higher and lower classification. A secondary school for girls is to provide a simple ordinary course, together with one that may lead the stronger and abler girls to work of a higher standard. All need a training in letters, but not all will want Latin and Greek, or medieval English; all will want some mathematics and science, but only some will want higher mathematics and specific sciences; all will want at least some acquaintance with the more "aesthetic" subjects, but a few only will specialise in music or graphic art.

Girls' special studies

The side in the girls' curriculum corresponding to the professional specialisation necessary in the boys' schools will be the subjects connected with the special position occupied by women at home, which has claims on the majority of them parallel to the claims of external occupation on the majority of men. They will therefore be taught the elements of domestic and general economy, and the arts that make home healthy and pleasant. The superstition which condemns all girls alike to spend many hours of the working day in the cultivation of music cannot be too strongly condemned. It is easy to concede that an average girl may be more naturally expected to acquire a pleasure-giving art than an average boy, but it is cruel and foolish to send all girls through the same mill and to prevent thereby the acquisition of other knowledge and the cultivation of other capacities which are of greater spiritual importance. The practice is, to be sure, a relic of the old-established notion that women are designed chiefly to make things pleasant for their male relations, but though that is (possibly) an excellent end to have in view, it is not the most important.

Physical differences

We may well rejoice that in some particulars the treatment of English girls in relation to school life has in this generation approximated to the education hitherto consecrated to boys. It would be grossly absurd to ignore the physical differences and even physical inferiority of girls, for they cannot bear such long strains and so much strenuous competition as boys. But a wider curriculum than that of the girls' schools of the older type, and a greater degree of physical freedom and muscular education, tend demonstrably to make women fitter to perform satisfactorily not only duties which may be transferred to them from the sphere hitherto limited to men, but duties also from which no legislation or social developments can relieve them. The careful educator of women will subject girls to shorter tasks than boys, will reduce emulation to its narrowest limits, will send them as much as possible to real exercise of limb in the open air, and will cultivate in them, above all things, simplicity and self-control. Everything that gives girls a reason for *action* is to be encouraged; the development of mere *sentiment* is a peculiar and complicated danger.

The need for balance in girls' schools

During the last thirty years so much striking work has been done in the growth and strengthening of women's education as to give rise to a danger,—so sensible women occasionally tell us,—that some women may see things in a mischievously distorted perspective. Boys, we know, trained exclusively in a man's atmosphere and amidst the often uncivilising surroundings of exclusively male institutions, tend to become rough and ungraceful, if not ungracious, in their dealings with women. The corresponding defect in girls is the growth of a pervading sense of difference between them and men. The girls' school where girls are hearing perpetual appeals and remonstrances directed to them in their character of women, where woman's work, woman's place in history, woman's duties, woman's claims, are constant topics, is not an entirely healthy institution. The proper balance is somehow destroyed, there is inevitable posing, and the eternally feminine atmosphere not unfrequently causes weariness and irritation. The result shows itself sometimes as an affected contempt for all men and men's matters, sometimes by mannishness and an equally disagreeable affectation of contempt for other women. The teacher of women does well to recall on occasion essential differences of the sexes, but boys and girls are best treated simply as persons; and the essential facts of their differences in constitution and duties as men and women should be reserved for rare treatment arising strictly out of special occasion and proper opportunity.

Mixed schools and classes

This brings us naturally to the question of schools or classes in which boys and girls, or men and women, receive education in common. This "mixed" system is not very popular in this country, though it has some very earnest advocates. So far as primary schools are concerned, the experiment has, to some extent, been tried over a sufficiently large area and in a sufficiently large number of instances to give us some grounds at least for coming to a conclusion. In Scotland as in America the "mixed" system is all but general, and though by no manner of means is approbation universal, acquiescence and apparent satisfaction are sufficiently common to justify the claim that its practicability and usefulness, with certain reservations, are proved. In England the rural primary school is mostly "mixed," the town school mostly confined to one sex or the other. In Scotland most schools just above the primary are "mixed," in England very few indeed.

From what we have just seen in regard to the distortion of perspective in schools limited to one sex, it may very properly be argued that the "mixed" plan tends to the maintenance of a proper balance and naturalness of sentiment. The ordinariness of the common association of boys and girls in their most important daily relations ought to—and observers say it does—cultivate sane, equable, and graceful relations between them.

After long indecision, I am inclined to believe that the advocates of the common education in school are right. The grave objection that the association of boys and girls in school may tend to sentimental distraction from the intellectual work constituting the chief and proper sphere of school activity is substantial enough, but it may disappear before sensible government and reasonable vigilance. A much more serious objection seems to lie in the difficulty of suiting a curriculum to the distinctly different needs of boys and girls without destroying on the one hand the variety which in practice is found necessary for the boys, and on the other the greater simplicity which is at present the special privilege of the girls. The "common" or "mixed" system seems to be essentially unsuitable to a school on the residential plan. The sobering influence of the normal relations and habits of home life check the growth of sentimental difficulties arising from the school association of boys and girls; but in institutions where youths and young women are brought up together, the great preoccupation of discipline seems to be to keep these victims of such abnormal organisation apart, and that very effort produces the most undesirable effects.

Common education of the boys and girls a question of convenience

Something remains to be said on the question of "mixed" staffs. Is it possible and is it desirable to give boys and girls instruction at the hands of both men and women? In this matter too, the primary schools have made some experiments for us by sometimes adopting the plan of mixed staffs for economic reasons, if for no other; and it is a fact that women undoubtedly make the best of teachers for young boys as well as girls. When we are dealing with older boys, the physical necessities of discipline give rise to critical difficulties, and in view of this, the primary schools do not

Mixed staffs

usually give women charge of boys over nine or ten, except where other conditions of organisation make it inevitable. No such restriction, however, is found necessary in America, but whether discipline in the absence of physical restraint is as satisfactory as it might be is a point on which neither Americans themselves nor impartial foreign observers are agreed.

It seems reasonable to believe that it is as bracing for girls to receive occasional instruction from a refined man who has a sense of humour as it is for boys to be taught by a cultivated woman. Women teachers of girls are too often excessively prim and serious, and men teachers of boys do not invariably give boys the opportunity of experiencing the disciplinary influence of delicacy and refinement.

Special studies in relation to Life and Livelihood

From what has already been said, it will be readily understood that any purposes of specialisation should be held subservient to the main end of education, the teaching people how to live so as to make the best of their powers, *how to live* rather than how to get a livelihood, for to get a livelihood is by no means equivalent to making the best of one's powers. True education, as Mr. Rooper says, is disinterested, is an end in itself, "Technical" education is interested, aims at contingent advantage.

Studies may be special in three senses

Observe, however, that the term "special studies" may be applied in three different ways. We may mean either the studies tending to the cultivation of some capacity highly developed in a particular individual and therefore likely, if encouraged, to confer a great intellectual benefit on the community; or we may mean the cultivation of some capacity or set of capacities likely to be of extraordinary service to an individual in getting a livelihood, or of some side of his intellectual or moral nature which has not shown a natural normal development; or we may mean the cultivation of what is called "accomplishments," the arts which make the externals of life more ornate and stately, if not more agreeable.

Specialisation, why desirable

The first seems, under certain conditions, to be justifiable on the ground of "public policy," because the finely cultivated individual, the great man, has from time to time manifestly added enormously to the sum total of the human stock-in-trade, social, material, political, literary, and so forth. The history of mankind has, indeed, sometimes been described as the history of its great men, and has been so treated.

The second seems to be desirable, and indeed inevitable, owing to the operation of the laws governing the division of labour or differentiation of function. The more complicated society grows, the more difficult is it to conceive of all men knowing all things and discharging all duties. We are constrained, by economy, to devise separate spheres of labour, and to employ one man to do only a few things We find that in order to do only a few things well a man must be more minutely trained for a limited series of operations than others are who are not called upon to discharge those duties So the pressure of competition settles the question for us. To be sure of employment, a man must show that he is better than the average person at some one thing, and so by himself, or by those responsible for his upbringing, he is put under special discipline.

All forms of specialisation may be justified furthermore on the ground that they provide the valuable stimulus of wholesome emulation. It is good for a man to feel that in some particulars he can do very good work;

work above the average of achievement. If we all have a special line of activity, this is a real help to healthy development, to energy, to industry. No class in society is so hopeless as the class of drudges, the unskilled labourers; and for this condition the dead level of their effective power is a sufficient explanation. With the consciousness of skilled capacity, hope springs at once into activity, and a man or woman works and improves.

With the first, the ordinary school has comparatively little to do. The advent of the genius who makes his promise manifest during his school career is not a common thing, and specialised training in this kind is generally given, if at all, as it was to Mr. J. S. Mill, privately. The genius for music is the gift of which we hear most often as detected and trained in youth; most other forms of fine natural capacity do not usually manifest themselves so early, and are therefore not subject to the pains and privileges that fall to the lot of the precocious musician.

The second form is the commonest form known to us, and we ought to make up our minds as to the propriety and effect of it. Every one can understand that a youth may leave school or college either more or less able to enter into the affairs of life with profit: but it is much harder to decide what kind of profit we ought to look for, and whether we are to expect quick or slow returns for our investments.

The school and preparation for professions

Let us see on what grounds the school is called upon to prepare directly for professions and crafts First, there is the pressure of competition which is so fierce that the man or woman who starts later than others finds the ground too fully occupied to give to the beginner even a foothold. There is, next, the hurry and impatience of actual business, which deprives the senior craftsman or employer of the necessary leisure for the instruction of his pupil. There is, thirdly, a growing conviction all over Europe that, to whatever end directed, the school career should be longer than it has been for most people heretofore; that is, public opinion is insisting more and more on the disciplinary value of school as a preparation for life, while it is also demanding that the school should prepare more directly for the material struggle for livelihood—a very remarkable fact indeed. Competition is a present consideration which we must admit to be very serious; we must accept also, for we cannot modify, the disinclination of the employer to teach his journeymen, a fact not more notable than the parents' abandonment of most of their duties to the schoolmaster. The question remains how we can use the growing belief in the disciplinary efficiency of the school to check or neutralise the evils of premature competition and the neglect of the teachers provided originally by nature.

Specialisation and Interest in Instruction

Several times in the course of our investigations we have seen reason for thinking that the bearing of school pursuits on life must in some measure be brought home to the minds of our pupils in order to ensure their interest. And the difference between the secondary and the primary school in this particular was that the pupils of the primary school had alrea~~dy a prema~~ture interest in and knowledge of the means of getting a livelihood, and that therefore the primary school must needs be more "practical," must sacrifice the formative studies to those which are of immediate application,—writing, ciphering, designing, industrial science, and the rest; whereas the secondary school, keeping its pupils later, can appeal to reasons of remoter interest—the trigonometry that steers the ship, the history that enlightens politics, the geography that explains history and helps commerce, and the language studies that open books and give merchants of different countries the means of intercommunication.

Specialisation must be preceded by the liberal course

Specialisation in secondary schools may and should be based on such a liberal preliminary as would be provided by the subjects already discussed in the preceding chapter. It may, because no excessive claims need be made in point of time; it should, because specialisation is more profitable when the general foundation is good. We may agree with Mr. Glazebrook in laying it down that specialisation before sixteen is a misfortune. But it is a regrettable though inevitable fact that in schools of a type just above the primary, a sort of specialisation begins as early as the fifteenth year for commercial and industrial pursuits. It is still, however, in the power of the school to modify possible evil effects of this early diversion to subjects of material importance by providing that the general education shall proceed side by side with the commercial arithmetic or the industrial chemistry or whatever else it may be that has become the pupil's main preoccupation.

The lessons in English, literature and rhetoric, of abounding importance

For youths cut off early from the chance of a more extensively liberal curriculum, the lessons in English become of abounding importance; and this fact has therefore been actually recognised in the constitution of the schools known as "Organised Science Schools" under the Science and Art Department. In schools of this type we may expect that not more than two-thirds of the pupil's time should be given, under any circumstances, to "special" studies; the one-third remaining should be most religiously dedicated to studies having no obvious bearing on the means of gaining a livelihood.

If by giving up even two-thirds of the boy's time to bread-winning studies we can secure a third of it for liberal education, and keep the boy at school for another two years, the gain is enormous. Quite apart from the moral and intellectual use of the time so employed, the prolongation of the *status pupillaris* and the deferring of precocious responsibility constitute a gain in themselves. In schools which do not keep their boys much beyond this age, the class system of teaching is one of the necessary conditions of school organisation, so that there is still the great stimulus of companionship, and the specialisation of study loses much of its harmfulness in still necessitating the discipline of collective work. This point also must be borne in mind, that some kind of rational balance must be maintained amongst "subjects," or else none will be properly assimilated. If we cut off a boy's history in order to teach him more geography, we do not necessarily succeed even in that purpose; geography and history not only help out each other where they touch and overlap, but in their alternation afford that variety in mental food which is necessary for digestion.

Deferred specialisation makes organisation more difficult

Specialisation of whole schools of a type higher than that just indicated must be even more jealously regulated. In the first place, the practical difficulties are greater; for the later on in life differentiation of function is carried, the more specialised it must become, and therefore the later specialisation is minuter, more complicated, more varied than the earlier. Thus it is easier to determine a uniform specialised plan of teaching in a school which all pupils leave at sixteen than in a school where most stay till eighteen or nineteen; the basis in the first case can be frankly "scientific," or frankly "commercial," and many pupils can be put through the same mill. But in the second type of school the difficulties are much greater. Here we have boys who are to be doctors, boys who are to be clergymen, boys who are going into business or industries as managers, boys who wish to get into the army, boys going to the universities, and so on. It is clear that in one school it would be impossible to provide separate courses for all these distinct classes of boys; any such attempt would call for an almost impossible complication of the Time Table and would (worse still) largely disorganise the school by jeopardising the corporate feeling which results from a large community of interests and pursuits. On the other hand, in dealing with pupils of this age and presumed status, we can count, very obviously, on a larger outlook and on the operations of a more remote interest than with younger pupils drawn from narrower surroundings. The bases of specialisation may thus be pretty broad and not very many in number. We shall then find that they fall into three or four fairly well-defined classes.

The broad bases of specialisation

First we have chiefly to consider the general divisions which the traditional wisdom of the universities has laid down as the bases of the larger specialised teaching provided by itself; and we find that the main lines thus prepared for us are (1) classics, philosophy, and history, or, shortly, the classical curriculum; (2) mathematics and the physical and experimental sciences; (3) modern languages and literature. Within these general limits it is possible to train three different types of mind, and to train them well. No one type rigidly excludes another, but each represents rather a predominant study for which a school Time

Table may provide, either for individuals or classes, a relatively predominant preparation.

If we consider, in the second place, the future of those pupils not necessarily passing to the universities, the general types need not be greatly different. The professions will range themselves under those heads for which they have greatest affinity, clergymen will need chiefly classics and what is implied in a classical course; doctors, engineers, captains of industry, will find the mathematical and science courses most appropriate; those going into commerce would be attracted by modern languages, or a combination of this and the former type. And this is what in effect is the practice of the modern school, the essential value, however, of some great general study or studies—English, Divinity, and the like—being never lost from view. For though diversity of aim and procedure is very valuable, community of feeling and interest is more valuable still. And it is of the highest national importance that those who are to figure as the effective intelligence of the nation should be as much as possible together and get as much as possible of their moral and intellectual preparation under similar refining influences We ought to be able to secure this without treating all our pupils and their subjects of instruction as if the teaching of the university was destined to complete the school course in every case. Genuine university "extension" should begin in the upper forms of the school

Some great general studies should always be pursued in common

We have yet to consider the subjects which stand, according to the old conventional view, outside the regular curriculum, as things indifferent, as "accomplishments". Properly speaking, as we have seen reason to believe, there are certain arts,

"Accomplishments"

aesthetic arts, the pursuits that cultivate "taste," which may well appear to have strong claims to necessary inclusion. Class-singing and music are amongst these. "Plain song" was once a very general part of the education of gentlehood, and collective singing has most fortunately established itself from the first as a part of modern education, at least in the primary schools. It is a pity that a place has not yet been found for it in every secondary school also. To put it on its lowest ground, it is a fine physical exercise; it cultivates very directly a sense of community and common endeavour; and it is a very powerful means of stimulating strong sentiment on wholesome lines. A fine school song or a fine patriotic song has a value not unlike in kind that of a notable hymn. And, it may be added, the reading of music at sight is a necessary foundation for a more elaborate education in music. A little time taken every week for training in the art of vocal music would repay itself many times over. In the meantime, there seems to be a good deal of danger lest the children of the "classes" will lack an aesthetic capacity which in the children of the "masses" will have been properly cultivated. And this would be to lose something of real profit.

Singing

Drawing, too, is one of those subjects which the older fashion regarded as something "extra," but which later practice has insisted on as a part of general education, systematically connected with other parts of the usual curriculum. It represents indeed a very natural transition in the school for little children from the coarser manipulation of bricks and from modelling in clay to the reproduction in two dimensions of things seen in three. It is therefore a most valuable part, in the early stages of education, not only of that cultivation of manual dexterity, of co-ordination of hand and eye, but also of

Drawing

the power of abstraction which we know to be of essential importance in early training. Later on it serves, as nothing else can, to assist the pupil to comprehend and to register in permanent form the facts of science, of history, of geography, which might otherwise have no permanent place in memory because they would have passed before it like parts of a shifting panorama. For by drawing, whether it be the drawing of a diagram or of a natural object, the pupil both observes better, and makes what he observes his own as he would by no other means. The practice of drawing serves, graphically, to produce the same effect as, rhetorically, the continuous reproduction of knowledge in an oral paragraph. In each case the separate parts of the object of knowledge are joined together by the original action and energy of the pupil's mind, and they thus become his permanent property. Drawing, therefore, is a powerful "aid to apperception".

Drawing and Writing

The relation of Drawing and Writing is purely accidental, and they are mentioned together merely for the purpose of insisting that writing should properly come later than drawing and be counted as a school pursuit of far less importance. It is, as a school subject, an instrumental or ancillary matter. Although it is usually linked with Reading and Arithmetic, it does not in truth possess the same claims as these subjects have, in their ordinary developments, to be counted as the bases of a liberal education. But again we must distinguish between the primary and the secondary schools. In the primary schools, Reading and Arithmetic, being necessarily restricted by reason of lack of time to those parts only which are mainly preparatory to higher purposes, remain almost as severely instrumental as Writing is, and are cultivated to similar ends. Doubt-less, each of the three can be taught so as to be, for certain limited purposes, either good discipline or bad; but we are constrained to teach them in their earlier stages, not for what they are in themselves, but for what they introduce. They are instrumental, but not general. In teaching Writing, we may cultivate accuracy, neatness, rapidity of execution; but it would be possible and perhaps easier to cultivate all these things by other processes, and without teaching writing at all. Writing remains, on the whole, then, merely a subject the mastery of which makes others in certain ways easier. It is probable that we make too much of very good writing, and that the time so spent would be more profitably spent in Drawing. We ought all to possess a legible and not unlovely handwriting, but farther than this, in the endeavour to secure uniformity, we ought not perhaps to go. A fine variety is the best test of successful teaching.

One of the best of the most recent books on the Art of Teaching, that of Mr. D. Salmon,[1] sets forth sixteen different specimens of style taught in schools to-day, most of them hopelessly ugly and mechanical, but worth careful examination for the purpose of learning what should be avoided. The most beautiful examples arranged for teaching purposes are to be seen in the charming book *A New Handwriting*, compiled by Mrs. Robert Bridges,[2] from whose Introduction I venture to make, and commend for consideration, the following extract:—"The ordinary copy-book, the aim of which seems to be to economise the component parts of the letters, cannot train the hand as more varied shapes will; nor does this uniformity, exclusive of beauty, offer as good training to the eye: moreover, I should say that

[1] Longmans, 1898. [2] Oxford University Press.

variety and beauty of form are attractive, even to little children, and that the attempt to create something which interests them, cheers and crowns their stupendous efforts with a pleasure that cannot be looked for in the task of copying monotonous shapes". The point best worth consideration in the teaching of writing to young children is the necessity of using a style which does not contort the body, or focus the two eyes in different ways, or puzzle the eyes of the reader by the needless multiplication and emphasis of uncurved strokes. The beautiful writing of the sixteenth and seventeenth centuries usually shows a minimum of straight strokes, and is therefore legible as well as pleasing. We can test the mere legibility of writing by observing at how many angles of vision it can be easily read, the more, the better. A style which requires the result to be held at a particular angle in order to be legible should be severely shunned.

For reference :—*Teaching and Organisation*, chapters by Messrs. Pollard, Glazebrook, and the Editor Laurie's *Institutes of Education*, and the same writer's volume of *Teacher's Guild Addresses*, etc Sadler on *Problems in Prussian Secondary Education* in Education Department Special Reports, vol iii Rein's *Pedagogics* (Van Liew's translation Miall's *Thirty Years of Teaching*. Butler's *The Meaning of Education* Harris's 'The Correlation of Studies" in *Report of the Committee of Fifteen* *Report of Committee of Ten* (U.S., 1893). Bain's *Education as a Science*. H Spencer's *Education*. Mrs. Bryant's *Educational Ends* and the same writer's *Curriculum in Girls' Schools* in the Education Department's Special Reports, vol iii H Courthope Bowen's pamphlet *The Subjects which should be Taught in Middle Class Schools*. Fitch's *Lectures*. Miss Burstall in the *Educational Review*, Feb. 1899. H. B. Garrod in the *Educational Review*, Jan. 1899. W. Dyche in the *Educational Review*, March 1899.

CHAPTER VI

AUDIBLE SPEECH

What is "pourquoi"? Do or not do? I would I had bestowed that time in the tongues that I have in fencing, dancing, and bear-baiting. O had I but followed the arts!

—Sir Andrew Aguecheek in *Twelfth Night.*

IN THE VERNACULAR

Reading Lessons of various kinds

IN most schools, if what is called Reading is taught at all, the exercise is a rather perfunctory ceremony, designed apparently, if there is any design involved, to see whether the pupil pronounces his words intelligibly and renders print in such a way that he is not taken to be a foreigner. A further step is usually made if the teacher endeavours to cultivate what is called "expression," when the pupil is required to render the printed words as if they were meant to be intelligible not as words only but as consecutive thoughts. A third and more rational kind of lesson in Reading is given when the teacher first of all allows pupils the time and means to master the meaning of their author for themselves, and then gets them to render it in the way in which they individually understand it. *Their* author, as Charles Lamb would insist; he is not theirs till they take his meaning, master it, appropriate it.

Now each of these exercises is, in its degree, legitimate; but every one of them tries to raise a superstructure before laying truly and well the necessary foundation. They all take a great deal for granted and concern themselves at too early a stage with what should be developments coming later.

The penalties of misuse of speech-organs

Let us understand at the outset that the Reading lesson is primarily a lesson in speaking. Both pupil and teacher are deeply concerned in the cultivation of audible speech. First as to mere intelligibility. Clearly, men or women who cannot speak without difficulty, or who are not easily understood when speaking, lack one of the first endowments indispensable for social communion; much of what they say must be ineffective, and the more ineffective in exact proportion to the numbers addressed. What they say passes by as the idle wind. Easy intelligibility is indispensable to the teacher above all others. The difficulty of maintaining the attention of a class, a class even of adults, is increased beyond measure if the speech of the teacher distracts or discourages or deadens effort by its harshness or its inaudibility.

But there is worse behind. Speech that is in any degree inaudible under reasonable conditions of locality indicates a physical defect or mismanagement of vocal organs that brings on the offender a cumulative penalty; every such error repeated tends to the injury and finally to the destruction of that most delicate mechanism which produces voice. Indirectly, too, it may seriously affect the general health. No class of the community suffers from this cause so seriously as teachers, for none use their voices so persistently and under such hard conditions.

Let us first consider the relation of the subject to general health. It turns mainly on the primary need for a proper use of the breathing apparatus. No other exercise can be regarded as a satisfactory substitute, for no other exercise cultivates the use of the lungs and associated organs under conditions that can be so exactly co-ordinated. We are not always playing football, riding bicycles, or even performing gymnastics; but we are always breathing and frequently speaking. Proper care and training teach us to breathe habitually in such a way as to use lungs and throat to their utmost legitimate capacity at all ordinary times. We need not be medical men in order to recognise what this means. A larger chest-capacity means more air in the lungs, and more air in the lungs means more oxygen for the purification of the blood, which, as we are told, is the whole secret of health.

The gymnastics of breathing.

The systematic teacher of reading and allied subjects, then, begins with the gymnastics of breathing; with such exercises as regulate the inhalation of breath, strengthen the mechanism of the lungs, and control the exit of breath in the formation of sound. Incidentally, and in immediate consequence of this, the muscular capacity of chest and abdomen is increased astonishingly, and with it, of course, the capacity for storing and using the very fuel of life. The second great step is voice-formation proper; the use of the proper vocal key and the means for securing resonance, sound-carrying quality, and the like; which to those who have to live by their voices are matters of the very first importance.

When the secret of correct breathing and sound production is learnt—but not till then—it may be said that the more strictly hygienic practice ends and the teaching of elocution, in its stricter sense, begins. Up to this point the chief steps have been taken to put the machine into proper order. But it must be remembered that constant practice is necessary, and if a teacher wishes his class to retain the lessons which he is giving them, the reading lesson should very frequently, if not always, be preceded by breathing exercises to be carried into effect in the subsequent lesson. This practice is not useful to the class only; it is especially indispensable to the teacher himself, if only because it serves as a reminder to prevent him from relapsing into bad habits and from forgetting that carelessness is so heavily penalised. If, then, the teacher wishes to preserve his own voice, he will give his *class* a little regular exercise in voice-production for however short a time daily.

It is not, of course, to be supposed that breathing alone, however accurate, can do all that is necessary. As all real authorities insist, in order to secure for one's own all the good effect that should come from systematic breathing exercise, we must have good ventilation, easy dress, regular bathing in tepid or cold water, general scrupulous personal cleanliness, and ordinary free and energetic general exercise.

The penalties of neglect

The penalties of neglect paid by the teacher are threefold There is, first of all, actual voice disease. Those who see a large number of teachers, primary and secondary, at their work, know that affections of the larynx are all too common and only too easily recognised. The persistent sore throat from which so many teachers suffer is due very generally, though of course not altogether and in all cases, to excessive strain on a few overtaxed organs called upon to do work that should be otherwise distributed; and it is a bad symptom that ought at once to be referred to the family doctor, or a properly qualified voice-specialist. At the earliest available period of his teaching career the young teacher should see that his actual practice is in accord with wholesome rule; and those who are responsible in any measure for the training of teachers are under the most serious obligation to see that this is done, if only for the preservation of health. We have, to be sure, to remember that many circumstances may contribute to produce the disease besides the practice of imperfect breathing and an ill-pitched and overstrained voice. Some general warnings we have just noted. In certain respects the teacher is at a special disadvantage, as for instance, in having so often to inhale chalk-dust and in being made a victim of the extraordinary helplessness that still seems to beset our architects when they approach the problems of airing and warming large spaces. But regular voice gymnastics and breathing exercises for a short time every day are the best protection that can be devised against the perils of school strain and are the best possible reminder of the general need to strengthen our defences.

That insistence on this point is not a mere monomania is only too sadly proved by such statistics as are available. For instance, quite recently, when four thousand teachers in the service of the London School Board accepted the Board's invitation to apply for lessons in voice-production, more than a fourth of them were declared to be or to have been suffering from some form of throat trouble.

Throat trouble, we know, is not the only definite and marked consequence of the bad use of the voice. In addition to this, most of us have found ourselves at the end of a day's teaching far more exhausted than we ought to have been; yet five hours' talking or lecturing, even in a difficult room, ought not to leave us weary and worn out. Given decent conditions of premises, we should feel stronger and healthier and more cheerful after this as after other physical exercise. But if our day is spent in a constant battle to get work done by organs which are not duly strengthened, or which are called upon to perform functions that should be shared by other organs now becoming atrophied because they are not used; if the throat and upper part of the lungs have to do work in which the mouth, the throat, and the whole of the lungs are alike concerned, it needs little medical or physiological knowledge to see that the inevitable result is nervous exhaustion and ultimate breakdown.

It is possible that many an earnest teacher thinks the strain and pain and the spending of himself in this way is inevitable, and that at all events the result is satisfactory so far as his class is concerned; at all events the teaching is effective. Yet even this is often a delusion. Facts are obvious enough, of course, when a teacher is brought up abruptly by illness or absolute physical incapacity; there is no ambiguity about such a circumstance as that. But a harsh and irritating voice, a noisy voice, a muffled voice, a monotonous voice, are all in their way ineffective; that is, they all hinder the teacher from producing on his class the result that he desires to produce. They all distract and tire according to their degree, where the effect should be interest and gentle stimulus. The uneasiness and restlessness of a class may often be safely set down to the unimpressive or harassing voice of the teacher; the pleasant voice is emphatically one of the best means of legitimate "suggestion" that a teacher could use. A well-managed voice carries and impresses in difficult and noisy rooms, when an ill-controlled voice and careless speech merely become part of the hurly-burly that is straining the nerves and temper of a class and making "discipline" impossible. A teacher should therefore be quiet, restrained, and distinct in speech. Let his words be few but let every one of them have its value for the class. There should be no loss by the way. A soft voice is an excellent thing in teachers.

So much for the teacher's duty in regard to a proper discipline of audible speech in himself. He is none the less bound to exact it fully from his pupils.

The faults of English speech

In the first place he has to combat in them the characteristic fault of English speech, its indistinctness. For one reason or another—some writers have suggested our native fogs—an Englishman does not open his mouth as widely as other folk, and he has therefore fewer tones. Perhaps, also, his comparative monotonousness is part of the general gravity and reserve of his character. Again, although it is true that England is not the only country where people indicate a word without fully pronouncing it, the effect is more serious in our case because our syllabic accent tends to fall back upon the first part of the word, with the consequence that we indicate the word by its earlier syllables and leave the latter syllables to take care of themselves. They are consequently slurred; vowels lose their original values, and the final consonant, if we are careless, receives only faint recognition. The vowels in the last syllables of *Oxford*, *London*, *water*, *coachman*, and *bun*, are, as usage prescribes, almost indistinguishable one from another. If, then, we are not scrupulous about the final *consonant* of a word, the means of identification are by so much the fewer.

Again, in the natural course of things, the final consonants are corrupted very frequently by the initial consonants of the following word. "Shut your mouth" (an excellent piece of advice) becomes "shutch oor mouth"; "his ship" becomes "hizsh ship"; "first shot" appears as either "firs' shot" or even "firsh shot". All these and such like corruptions tend to indistinctness and inaudibility. And if, in addition to faulty pronunciation, the tone is monotonous and the voice is wasted by confinement between closed teeth, indistinctness and inaudibility are inevitable. Such indistinctness brings with it as a first consequence, ineffectiveness. To be informing and convincing, speech must be readily understood, and reasonable precision of speech is some indication of a desire to be clear in thought. The boys and girls who at school are permitted to "express themselves" in slovenly form are the less likely to grow up into intelligence and intelligibility; they are therefore the more likely, in their turn, to miss their points and to lose the influence which is the due of those who know what they mean and can communicate their meaning to others without effort and without error; for the purpose of speech is to inform and to persuade. It is quite worth the while of the teacher to show a class the difference between impressiveness and unimpressiveness proceeding from this cause. Our boys and girls in general leave school more or less inarticulate; whatever they may know, they certainly find great difficulty in saying it.

Provinciality of accent is another defect which the school should do much to remove. Variations of dialect in themselves no one with a scientific or scholarly sense can deplore, and the children of primary schools at all events must be allowed a large licence so long as they speak articulately and bring their voices from the right quarters. But in schools of the secondary type we must exact from our pupils general conformity with the usage common in educated society. We need not concern ourselves to look for a final standard, for we shall be disappointed; no class of society has a monopoly of correct speech, and no dictionary is quite trustworthy.

Above all, it would be extremely unsafe to follow the example set by "the stage," which besides its select store of mannerisms (such as *my̆* for *mȳ* and traditional pronunciations in certain stock passages) has as many defects as any other institution recruited at haphazard. We can merely satisfy ourselves approximately that such and such is the pronunciation of the most cultivated people of our acquaintance, and follow this rather than any dictionary that was ever compiled.

The teaching of speech

To secure distinctness and accuracy of speech, whether in the mother-tongue or any other language, the most gradual way is also the shortest. We must begin, indeed, here as everywhere, with imitation pure and simple. No one is so crazy an enthusiast for the analytical method as to teach an infant to speak by giving it unmeaning sounds to copy. Automatic synthesis precedes analysis. The babe in arms learns *words* and then agglutinates words to make sentences; and he must do this to a considerable extent before he passes into the hands of the professional teacher. Perception and conception and judgment are all at work, though of course at their weakest, as soon as thought begins. But when children begin to recognise the written or printed symbol and to associate it with a sound, we must do our best to see that the associated sound is a correct one, that is, such as conventions require.

We begin, of course, with the mother speech, teaching all the sounds, simple and compound, that the infant needs every day. It can hardly be right at this stage to trouble a child with sounds not represented in his own language. No good purpose can be served by such a practice, for the sounds taught are too easily forgotten in childhood unless they are associated with percepts.

A word may be here interposed to point out the objections to the phonic method of teaching reading in the earliest stages. This plan seems to be a clear case of impertinent analysis and rationalisation. To teach children that the letters are mere symbols for impersonal sounds is to deprive letters of much of the interest which attaches to them if *they have names*. The child is not more perplexed by "H for Horse" than by the injunction to remember that the symbol H is reproduced by the reader in such and such a way. Give the letters names, and they acquire a personality and therefore interest. Besides, it is no small matter that, with names, they can be committed easily to memory. There is reason for thinking that the old way is, here again, at least as good as the new.

The Phonic Method

When the child has mastered the difficulties of reading the simplest matter, we may *then* profitably begin to analyse sounds so as to secure absolute correctness and quickness of ear. This plan offers few obstacles if the teacher confines himself to the sounds of the native language, for the child has already a familiar stock to draw upon for examples; and it certainly prepares him for a correct apprehending of strange sounds when he comes to them as soon as he is put to systematic training in a foreign language.

When this last point has been reached, the need for a more systematic analysis of sounds is more marked. Sound-drill and sound-analysis can, of course, be conducted without a special alphabet, but obviously at a disadvantage. The correct reproduction of sounds must always be ultimately a matter of imitation; but if we have an alphabet whose symbols respectively represent one sound and one only, it is possible, having once learnt the key, to reproduce all the sounds

Analysis of sounds

in any of the languages which the key is contrived to unlock. And if the sounds are arranged in systematic order according as they arise simply or in combination, then the task of understanding and remembering them is reduced to its lightest. Clearly the teacher must here call in to his aid representations, as graphic as he can make them, of the mechanism of sound. It is possible to make a pupil produce a difficult sound correctly by showing him the position of the vocal organs most obviously concerned. The so-called deaf-mutes are most successfully taught to pronounce and articulate by being made to see, and even feel, the work done by the mouth, lips, teeth, tongue, throat, and so on, in other people.

Suggestions for procedure in the Reading Lesson

We ought now to consider the proper procedure of the Reading Lesson. It may well be believed that it is a really desirable exercise at all stages, from the first to the last stage of school-life. It is equally certain that the procedure must be different in different stages. The little child must be first made to pronounce words correctly; but as soon as his stock of words is sufficient to provide instances of all English sounds, he should be taught to analyse the sounds, and to produce them *properly*, using every speech-organ *properly*. The voice-exercise should then become a part of every lesson that calls itself a lesson in reading.

As soon as we have passed through the initial stages, and pupils begin to be able to take in the sense of a whole paragraph, say at the age of six or seven, the ordinary lesson should be preceded by a few minutes of private reading during which the class is mastering the passage which it is to be called upon to read. The teacher will then require one or more of the class to repeat the substance of the paragraph or chapter, making sure that every child sees the drift of the passage. Explanations of unusual words in isolation are best left until the whole passage has been read aloud; but when a real difficulty shows itself the teacher may well give a paraphrase from which the class can infer the meaning of a strange word, or (better still) phrase. If a teacher habitually supplies the class with the meaning of a strange word, the children will inevitably acquire the habit of waiting for some foolishly kind Providence to supply a synonym whenever unusual sound strikes their ear; whereas their instinct should rather move them to try to infer the meaning from context. This kind Providence, who is also placed (by publishers) at the service of teachers, is represented in our reading books by the lists of words with their definitions that appear at the tail of each exercise. These should be neither needed nor used; they are types of the too much instruction which is such bad teaching.

When the teacher has satisfied himself that the general drift is understood, he can call upon his boys in succession to read; requiring, first, distinctness, particularly of consonants; next (in a school not severely "elementary") purity of vowel sound; and finally, such natural intonation and variation as show that the reader understands the passage and wishes it to be understood by others.

Punctuation and Phrasing

Punctuation may very generally be ignored, for the purposes of reading aloud, if, as Mr. Burrell enjoins, we make the unit of phrasing a definite image or idea. The image or idea is, in fact, the unit commonly used in intelligent speech. We run on until the idea is interrupted or completed. Then we draw breath and proceed. The old-fashioned "counting" at stops is both mechanical and inaccurate, and places the reader at the mercy of circumstances and the printer's corrector.

As a rule, "pattern" reading of short passages and simultaneous or collective reading are both most undesirable expedients. Both tend to kill real intelligence and originality; each has its other peculiar demerits. If a teacher begins a lesson, as too many teachers do, by reading a sentence or a few sentences for the class to imitate, the class infers that the first thing expected of them is that *they should imitate the teacher*, whereas the all-important thing is that they should understand the passage and read it so that others may understand it as they understand it. Pattern-reading comes properly at the end or in the middle of a lesson, if the teacher is reading only a short passage. On the other hand, an occasional half-hour which the time-table gives to Reading the teacher may spend with the greatest profit in reading new matter carefully and clearly not to the *eyes*, but to the *ears* of his pupils, their books being closed. The teacher should not, in the formal Reading Lesson, read the passage till it has been read aloud by one or more of the class; and he should never call for an exact imitation unless it be to correct a fault of emphasis, in which case it may be indispensable.

Pattern reading

This subject of emphasis is very curious. Until one has tried to teach reading, it is hard to believe how many people of apparently fair education are unable to stress an italicised word. It is a question, no doubt, of intelligent apprehension; and a few experiments serve to show that much reading aloud is done almost mechanically, by the eye alone, the mind being only partially interested and partially employed. The ordinary reading lesson in places where they teach reading cultivates this senseless habit only too often. Unskilled readers tend to lay emphasis almost invariably on the last word of a sentence, except of course when it is a

Emphasis

particle; and in fact our English sentences do generally require this usage. But the drift of a sentence, and therefore its intelligent reproduction, can always be most easily reached by the practice of finding out and stressing the word which the author means to be the key-word.

Simultaneous or collective reading

Simultaneous reading or speaking is hardly ever defensible, except on grounds which are a reproach to organisation—that is when classes are so excessively large that otherwise the bulk of the pupils get no practice. It causes shouting, it promotes uniformity and sing-song, it gives the lazy boy the opportunity of shirking, it spoils the natural voice, and it is a terror to civilised ears. If it *must* be used, then the class should be trained to read or speak in a very subdued manner; but it may well be believed that it is better that some pupils should get too little practice rather than the whole class should be demoralised by simultaneous intoning.

Distinctness always important

So far what we have said ought to apply to younger pupils only—to classes of children between the ages of seven and thirteen or fourteen. The reading lesson after these stages should be rather a means of keeping up the habit of precision and distinctness, properly moderated pace, and, in general, the healthy and effective use of the vocal organs. *At every stage of school life these things are important*, and at no time should a teacher permit a slovenly habit of indistinct speech to grow up in his class. Care about such matters as these reacts on all parts of the work; the best work is done when the tools are kept in best condition. Clearness of speech and clearness of thought are not far apart.

The recitation exercise requires treatment similar in all obvious respects to that given in the case of reading. It

Recitation

should be used first as a kind of compendium or memorandum of the qualities required in clear and effective speech. If the passages chosen are, as they should be, of fine literary quality, then they are possessions for ever, and of priceless value in the cultivation of taste. In practising this exercise we must not allow our pupils, during the first stages, to recite in too big a room, for this tends to induce them to pitch their reading or reciting voice too high, and the habit grows. Good results in training the habit of distinctness may come from an occasional use of whispering as an exercise.

IN FOREIGN TONGUES

Learning a foreign tongue to give precision to the vernacular

It is highly important to note here how much the study of a foreign tongue *as speech* helps us to distinctness in speaking our own language. In learning a foreign tongue one soon feels—I do not say that one consciously recognises—that clearness and distinctness, that is, the plain discrimination of sound from sound, is all-important; and one comes back to the use of one's own speech with a clearer sense of what is needed. No one speaks his own language so clearly as one who has tried to make it intelligible to foreigners. The learning of Latin and Greek by heart, necessitating the precise discrimination of sounds and particularly the careful rendering of the final syllables, has been of incalculable service in rendering the English gentleman less inarticulate than he would be if left to draggle-tailed monoglottism. For this purpose Latin and Greek are better than French (though not perhaps German) because in French the final consonant is naught, and the final vowel is all in all.

In order to secure some universal representations of different sounds philologists have constructed phonetic alphabets. It is true that all the alphabets propounded are in a greater or less degree arbitrary, the most frequently used, and apparently the best, being that which has been adopted and, to a certain extent, popularised by Professor Vietor. All alphabets, however, phonetic or arbitrary, are open to the objection that, in spite of every effort to secure a symbol for every sound, there are dialectical differences, small and great, which the alphabet is powerless to deal with, except by an infinite multiplication of symbols.

Phonetic alphabets

Phonetic symbols, for instance, may indeed be devised to mark the differences between (say) the English and French renderings of l, t, and d; but it seems easier, and quite as effectual, to show once for all how in French these letters are pronounced further forward in the mouth. We may haply end by burying ourselves under our machinery. On the other hand, phonetic drill may well be used, in the modified forms just suggested, from the first; and it should gradually grow in difficulty until all the sounds of the associated languages are well produced.

That a phonetic alphabet is, in the present condition of teaching, assuredly valuable, if not too complex, for older pupils who can interpret it admits, to my mind, of no doubt; certainly the best to our hands until, as Professor Spencer suggests, every schoolboy has his own phonograph to which he can betake himself for the model sound. Moreover, the phonetic alphabet must be all but indispensable to the bulk of those who are called upon at the present time to teach modern languages in schools. It seems to be agreed that, with some brilliant exceptions, Frenchmen and Germans do not teach their own languages very well to English boys and girls; and French and

German school authorities themselves act on a like presumption in instructing their own youth, seeing that they entrust the teaching of English to English teachers only under very rare and most exceptional circumstances.

Pronunciation

Of course the teacher of a foreign language should have mastered it; but at present the supply of Englishmen and Englishwomen who, having thoroughly learnt French and German where they are spoken, are ready for service in the schools, is very small indeed. We must therefore be content with less expert agents, and something less than perfection in the teacher may secure results, not the best possible, but still of lasting benefit. In the meantime, it is not too much to ask of English teachers that they should take the utmost pains to secure accurate pronunciation and intonation in such a way as to enable them to transmit the sounds fairly well to their pupils. *J'ai* is not jay, *mère* is not mare, nor *rire* rear, nor *lui* looee, nor *voulu* vooloo; and yet I have heard all these, and even worse, from teachers in the act of teaching.

Intonation

Nor is intonation a matter of small consequence. A Frenchman will understand less perfect French from an English speaker if the Englishman has some practical notion of the way in which the French speaker modifies his tones. Even English, as we know, can be spoken with an American intonation and becomes then less intelligible and less pleasing to an English ear. How much, then, must it puzzle a Frenchman if an English speaker uses in French the somewhat monotonous deflection of voice and falling emphasis which is characteristic of English.

It is of all things important that the pupil should be made at the earliest stage to *think* in the foreign tongue, to associate what he gets in perception and conception not with the English word, so long as he is speaking a foreign tongue, but in its foreign setting, with the foreign word. This is why it is so undesirable, most particularly during early stages, to spend time laboriously translating from one language into the other, and particularly in translating from the foreign into the native language. Every time we allow the pupil to put the two words together, the vernacular word and the foreign word, we make it more difficult for the foreign word to come spontaneously to the "tip of his tongue" without the English word to bow it out; we interpose a quite unnecessary obstacle between the object or idea and its immediate presentation under the foreign name. In fact, the mind stops to translate when it should *think* the thing or idea without any intervening medium. Moreover, in the learning of a language, the most serviceable unit is not the word but the phrase; it is the phrase that gives its value to the word, and not *vice versâ*. If pupils can be got to think in phrases, three parts of the work is done; but if they have to spend time in comparing (or rather contrasting) words and idioms, they can never learn to speak at once with ease and correctness.

The foreign tongue must be used for *thought* from the first

The fact is that our common practices in the teaching of modern spoken languages have, like a good many other forms of procedure in teaching, suffered by having been assimilated to the traditional and, in their own cases perhaps inevitable, methods of teaching the "dead" classical languages. Professor Blackie taught even ancient Greek as a spoken language, and his method had no doubt much to recommend it; but there is this great difference between an ancient and a modern tongue: in the modern you can and must appeal to the living

Erroneous analogy between spoken and dead languages standard of correctness, whereas in the ancient there is less pressing need for correctness in the vitally important matter of accent, pronunciation, and intonation. For we do not use an ancient tongue as a means of living communication, nor can correct accent, pronunciation, and intonation be exactly ascertained. Our best efforts can only, in fact, be an approximation reached by a painful process of deduction and conjecture. When you are learning classical Latin and Greek, you cannot go to the fountain head, to the world where Latin and Greek are *thought*. You may therefore have to be content in these languages to take the word as the unit at your first step, and work up only gradually to the point at which you read the phrase itself without analysis. But in neither the mother-tongue nor in any other living language that you wish to *speak* should you pursue this toilsome path.

Excessively analytical English methods

It is this consideration which condemns the excessively analytical method usually followed by English schools in what is understood to be the teaching of our own language. Instead of beginning with systematic efforts, properly graduated, to cultivate the pupil's power of expression, our teachers are mostly accustomed to spend their time in teaching grammatical analysis and parsing, nomenclature, and such like. This excessive analysis is more truly paralysis; for the study of English comes to mean for most of our youth the dissection of sentences into words and clauses, not fecundity and accuracy of expression. And too many teachers think, or appear to think, that "composition" can be taught only by setting a theme and telling a class to write round about it.

But except in the very lowest forms, no lesson that lends itself to recapitulation should be considered as complete until one or more pupils have stood up in their places and recounted, without prompting, what they have learnt. This process is not unknown in English schools, but is far more the rule in France and Germany and America, with the natural result that whereas our boys and girls of sixteen or seventeen seem often to be unable to put half a dozen sentences together, the French or German or American pupil of corresponding status can not only sit down and write a logical and connected narrative without effort, but stand up, and standing up, think aloud. If this is generally insisted on, every teacher becomes, in a measure, a teacher of the native tongue; and something more. For knowledge that lies waiting, only half alive, until the appropriate question is asked, is not knowledge at all. The properly instructed pupil should be able to make his knowledge come, so to speak, at call, in proper series and connexion. It is no uncommon experience in oral examination to find that a class can answer an infinite number of questions, and show a large possession of disconnected facts, but that it is unable to produce them, make use of them, command them, at will. The pupils have not realised that it is each member of the class for himself, and not the teacher, who is the link binding these facts together into a whole; that they are *his* facts and not the teacher's. The facts are, in truth, only imperfectly "apperceived," and they soon sink out of memory.

Oral recapitulation of lessons

After securing simple *audibility*, the teacher, then, must cultivate the power of *continuity* of speech.

Let us revert to the questions connected with the teaching of speech in modern languages. The considerations that weigh here are not quite the same as those that guide us in getting a language studied for the purposes of literary mastery. The power to *read* and understand written or printed matter may go with marked inability to *speak* and to understand speech.

The services of M. Gouin

In the enforcing of the truth that every language must be learnt by use rather than by rules, M. Gouin and the apostles of his teaching have rendered real service. They have, at all events, called attention to the futility of the attempt to teach speech exclusively by the slow and imperfect method of books and translation. They have not rediscovered, but they have advertised, the practice of teaching by means of percepts and concepts at first hand. In so far as the cultivation of audible speech is concerned, it must be admitted that this is a vast gain, even if more is claimed for the "method" in rivalry with old practices than it seems to deserve. It may well be taken as a general inspiration; but its rigid rules seem to experienced teachers to be unnecessary, and it is assuredly an immense strain on the teacher.

M. Gouin's method claims to be original in recognising the immense work done in the learning of languages by the visualising imagination. I do not know that this can be sustained as it stands. It would seem preferable to admit that M. Gouin has done more than others to carry into effect the principle of teaching by means of things, that is, objects and actions, and that he has rendered admirable service in establishing a more rational series in successive stages of teaching than is provided by the arbitrary analytical method on which most of us have been brought up. He is distinctly and unexceptionably right in taking as his type of procedure the stages by which we learn our mother-tongue, the immediate association of the object or idea with the word that represents it.

The chief points on which the Gouinists oppose the prevailing classical methods seem to be as follow:

(1) The classical method permits, even requires, a book to be read before lessons in pronunciation are given; M. Gouin would not permit the printed symbol to be seen until the pronunciation and meaning are part of the student's mental stock, and known not separately, but as parts of an organic phrase.

(2) The classical method interposes the native word between the foreign word and the object or idea; M. Gouin proceeds direct from the idea to the foreign name or phrase. He will have no "translation".

(3) The classical method sets "exercises" which have no psychological connexion; M. Gouin contrives a rational series or sequence linked by development in time, forming separate but not disparate dramatic scenes of life, and therefore ready at once to become part of the learner's mental stock.

M. Gouin devises "series" which are typical, *i.e.*, general, but also exhaustive, because applicable to all similar objects, in their doings and relations. Thus he claims to divide the possible expression of ideas in any and every language into fifteen or twenty chief series, subdivided again into fifty or sixty special series, all logically connected.

In his own words—"A series follows the being it is dealing with, first in the life of one day, then in its life during the four seasons of the year. It thus embraces the totality of its existence, and consequently reproduces the totality of the terms which the language possesses for the expression of all that we know about this being." Not a single detail of the life should remain unexpressed; the whole vocabulary should be used; the whole thirty thousand words of the ordinary language being arranged in "system".

As in teaching the objective language, so in teaching the language of action, every step is successive to another. The teacher acts the scene, and the pupil follows suit. The value of this method is not to be denied. But it most obviously throws a heavy burden on the teacher, the perpetual effort to visualise and to act being most serious; and unless the teacher works at very high pressure, it may easily become mechanical. Moreover, it hardly allows for inevitable breaks. On the other hand, a very liberal use of it, combined especially with pictures, is probably the best procedure yet devised.

The golden rules seem to be these:

The golden rules

(1) Avoid translation as much as possible; use rather first talk and then free composition however clumsy.

(2) Teach by means of the sentence. If a new word is wanted, let it be seen in several sentences and its meaning inferred, not communicated by label

(3) Provide an object where you can, and suggest a mental picture where you cannot, in all that you teach.

(4) Put off syntax till a substantial basis of practicable speech has been learnt; and then have the chief rules inferred.

Objections to colloquial method

It is objected to the plan of acquiring a language colloquially that if soon learnt by this method it is also soon forgotten. This is true enough, but the objection assumes that the practice is confined to mere talking. It is of course obvious that little can come of such an exclusive method, because comparatively few words are needed for ordinary colloquial purposes, and because we do not, fortunately, spend so large a part of our lives in talking as to cover all subjects of interest in our daily conversations. But the first steps must needs be colloquial if the pupil is to be *convinced* that the language is a real and living medium of thought. The infant learns to think and to speak at the same time. This is the mother-method of nature, and, as Professor Laurie says, to the child even the mother-speech is foreign. Learning Latin and Greek as most of us have had to do, we can hardly in our youth have believed that Julius Cæsar and Thucydides spoke the tongues with which we are so imperfectly acquainted. But if we had ever spoken Latin and Greek ourselves, our conviction would have been different. We can easily agree with Heine when he says that the Romans would never have had time to conquer the world if they had had to learn the Latin grammar. Nor will our pupils "understand" ideas in French or German unless they begin by associating them with objects rather than, however unconsciously, by labelling them with names.

Report to the American Committee of Ten

There is a great deal of justice in the recommendations of the conference on modern languages which reported to the American Committee of Ten. "A mistaken idea of thoroughness may cause the waste of much valuable time. Sight translation should begin at the very outset of the first year's course, and should always form an important part of the work; it should proceed as briskly as possible, the teacher lifting beginners over hard places, and showing them how to find their own way through the rest. All passages of an abstruse or technical nature should be skipped, or translated by the instructor; not a moment should be lost in contending with difficulties that have no necessary connexion with the language."

A scheme for beginners

A plan that has been known to succeed well in dealing with small classes of young learners proceeds on lines somewhat as follow:—Some simple illustrated book, say in French, such as Mrs. Bell's *French Without Tears*, graduated, and repeating over again words that have occurred, is read and re-read to the children with the illustrations—but not the text—in front of them, until they almost know what is coming. Concurrently, the children are taught nursery rhymes—preferably those for which they have the English key, such as *The House that Jack Built*—by oral repetition. Then the French text itself is placed in front of them, and they read it with delight as French, showing little or no hesitation over pronunciation, for it does not occur to them to pronounce the words except according as their ear has been already attuned. After two or three books have been so treated, the class will be able to read simple fairy-stories with something like ease. German may be treated, at a later stage of school-life, in the same way. The child reads *Shock-headed Peter* in English till he knows it, and after some such drilling as above described in the case of French, he reads the original *Struwwelpeter* with little difficulty.

Good results have been known to come from the use of the method here described for teaching one language and the use of the old "Prendergast" method for teaching another concurrently By the "Prendergast" system the child learns to translate at sight and instantly a series of phrases and sentences gradually growing in complexity. After a large number of these have been mastered, he is taught to translate in the usual way, without learning any analytical or formal grammar, but strengthening the general habit of rapid retranslation already implanted. It is no small part of the value of this method that the use of the slips of paper on which the sentences are written suggests a game which the child delights to play.

In teaching modern languages, however, more than in any other study, we are seriously obstructed by our system of examination, which mostly attaches an altogether excessive importance to the written exercise, to the entire exclusion of speech. An immediate though only partial remedy might be applied by the introduction of dictation into all language examinations.

For reference :--Burrell in *Teaching and Organisation* and the same writer's *Clear Speaking and Good Reading*. *Voice, Song and Speech* by Lennox-Browne and Behnke. Behnke's *Voice-Production*. Soames's *Teacher's Phonetic Manual*. *Reading and Recitation* by Rooper and Lott. Miss Beale in *Work and Play in Girls' Schools*. Spencer in *The Aims and Practice of Teaching*. Storr in *Teaching and Organisation*. Swan's translation of Gouin's *New Method*. Rippmann's *Hints on Teaching French*. *Report to the* (U.S.) *Committee of Ten* (Washington, 1893).

CHAPTER VII

LITERATURE AND FORMAL LINGUISTIC STUDY

All this is ours for the asking. All this we shall ask for if only it be our happy fortune to love for its own sake the beauty and the knowledge to be gathered from books.—ARTHUR BALFOUR.

IT is not difficult to understand the grounds for the assertion that the chief basis of a liberal education is the knowledge of and familiarity with great books.

The persistence of the great book

In the first place, the fine work of literary art is the best thing that a nation has to show. It is the highest outcome of the national life. Political and social institutions pass away, or become modified by absorption into other systems; so the Rome and Greece and Judaea of antiquity, in so far as their ancient politics are concerned, are now mere geographical expressions, but their great works of literary art survive in and by themselves. They do not merely modify other like works but they also remain as they were left fresh from the hands of the producers. David, Homer, Vergil, Dante, Shakespeare, and the rest, are alive now and are living influences. The works of graphic art, such as painting and statuary, have a comparatively short life; and though greater in apparent bulk, are more fragile and transitory. The great products of engineering art—roads, bridges, buildings, monuments—fall into decay or lose their individuality and often their history with the development of civilisation. But the great book remains.

It is, no doubt, partly an accident that great books should enjoy such long life—that accident the discovery of printing. Yet it is a great tribute to the inherent power of great books that what they contain must in some famous cases, such as the Homeric poems, have been handed down from mouth to mouth for generations. Country-side ballads have been handed down even in this century in England, and would still, no doubt, survive in the minds of the people but for the inevitable result of teaching everybody to read, the weakening of the habit of memory.

Literature provides historical landmarks

In the second place, literature provides us with historical landmarks. We cannot be said to understand the general "history" of a particular time unless we know something of the thought that stirred its most subtle thinkers, and interpreted and made articulate the spirit of the times in which they lived. The most notable facts in the history of the times of Edward III., of Elizabeth, and of Victoria, are that Chaucer and Shakespeare and Tennyson and their contemporaries lived and wrote. Political history, social history, economic history, even ecclesiastical history, are all reflected, illustrated, and interpreted by what we find in the great works of contemporary literature. Of course, as books are multiplied, the stock of material becomes richer, and it is found more and more difficult even physically to compass a complete knowledge of contemporary ideas. We cannot read everything that is significant. But our embarrassment is the embarrassment of excessive wealth, which makes it all the more necessary in a comparatively advanced stage of society, such as that in which we live, for the educator to step in and appraise books rightly, so that the youth of the schools may have guidance early, before they lose their way in the wilderness open to them.

Literature is a compendium of studies

The third reason for the importance to be attached to the study of literature is that it completes and embraces all other studies. This does not imply approval of the horrid hotch-potch of grammar, history, geography, antiquarianism, science, orthoepy, and the rest, which, in the guise of notes, often chokes the life out of a fine piece of literature offered for the delectation of a class of young people; but rather that the study of the great book puts life into all other branches of interest and school study. All other studies are of small consequence in a "liberal" education if thought is mean and unlovely, if the imagination is foul or uncultivated, if the appreciation of the power of lucid and beautiful expression is lacking. But fine literature gives a zest to any subject, and a fine book may be written about anything that enters as more than a piece of gymnastics into the school course.

The powers of appreciation and expression

The fourth reason arises out of the last. Power of appreciation, of which we shall speak at length presently, can be so cultivated that the power of expression is easier. The more carefully we read and examine the work of great writers, the easier is it for ourselves, when we speak, to say what *we* mean. This does not necessarily imply that we make models of the great books propounded for our study; it means rather that every effort to discover the secret of the rhetorical power of a fine passage or the ethical influence of a great book quickens the divine spark in ourselves.

Patriotism

The study of literature, again, has its value as a training in patriotism of the honourable and reputable kind, as we shall see, by inspiring a rational love of country through a respect for its great past and for great common possessions.

An aesthetic standard

Finally and chiefly it is important to send our pupils out of the school with some sort of sound aesthetic standard. This we cannot achieve except by giving them some means of judging between the great or beautiful and the mean or unlovely. The discipline that cultivates nobility of character, the preference for the good rather than the base, provide a standard of appreciation in conduct through acquaintance with great exemplars and admiring love for them. So the discipline of literature cultivates the sense of pleasure in great books by accustoming the student to see the world as great writers have seen it, by teaching him to understand and place himself as nearly as possible at their point of view. We cultivate character by quickening in our pupils the good that is in them, and we do this most surely if we can fire them with admiration of good men ; we cultivate refined pleasure in noble literary work by stirring up in their minds, so far as we can, those ideas which respond to the magnificent, picturesque, or subtle ideas enshrined in great books. Thoughts not entirely mean, lying somewhere like dull sparks in ourselves, burst into flame in the atmosphere about great writers. And we must not impose on sermons and theology the whole duty of giving moral and elevating ideas.

If we have once succeeded in making our pupils aware of the fine qualities of great prose or verse, they are the more likely to look for such things elsewhere and to prefer them to inferior material when the choice is offered. It is a libel on human nature to say that familiarity, if by familiarity we mean intimate knowledge, breeds contempt. The things we know best we love best. To despise what is familiar is a mark of littleness of soul.

Literature; not English literature alone

We should notice that our subject is literature, but not the literature of England only, though that must needs supply us with our examples and is most important for English people. For it is necessary to remember that the lesson in literary appreciation can and should be given incidentally when we are dealing with literature in any language, and that comparison in literature is one of the most stimulating of processes conceivable, as soon as pupils are old enough to understand it. Opportunities for illustration occur oftener than one would think. We may enliven Caesar by finding an illustrative passage in Kinglake or Napier; a class advanced enough to read Molière may be invited to suggest parallels in Dickens, even if we cannot find suitable illustrations in our own eighteenth century writers; an idyll of Theocritus sends us to Matthew Arnold, and so on. Where other languages are taught at all by means of great books, it is of the greatest service in the cultivation of what we call taste to find the parallel in our own stock. Education, as it has been said, is meant to fit people for life. And Literature is life.[1]

"English" study is of books, of philology, of "outlines"

We begin by making a clear distinction between the three branches of literary study sometimes —too often—combined under the name of "English"; between the knowledge of a book or books, the knowledge of the grammar and history of the English language, and the knowledge of the "outlines" of English literature.

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[1] For herein may be seen noble chyualrye | Curtoyse | Humanyte | frendlynesse | hardynesse | loue | frendshyp | Cowardyse | Murdre | hate | vertue | and synne | Doo after the good and leue the euyl | & it shall brynge you to good fame & renovnee | And for to passe the tyme thys book shal be plesaunte

These are three distinct branches of study; the first cultivates the power of appreciating and analysing on rhetorical and aesthetic grounds some famous book of great value in itself; the second combines science and history; the third is history pure and simple. They are best treated apart, and the second and third should be used in connexion with the first only for the purposes of elucidation, the pupil being lifted rapidly and easily over difficulties so that he may not be brought up suddenly and put off the track of enjoyment, which is the indispensable condition of any training in literature that is worth the name. The training of the power of appreciation is of all our objects that which we should work hardest to attain.

Begin by presenting the book as a whole

At every stage we must begin by presenting the subject as a whole. We must get the general view first of all. Let us take it for granted that no passage or book should be chosen for the lesson in literature unless it is possible for the class to get a fair general notion of its drift by inspection, by reading it through cursorily. Before a piece of literature we are in the condition of a three or four year old child who is introduced to an "object"—say an orange. We should not expect much to come out of an endeavour to introduce him to rind, skin, pips, and so forth before we handed him the whole orange, to make him acquainted with it as a whole, however lacking in articulation his knowledge may be. It is not otherwise with a work of art; if your pupil is to "know" it, he must see it first *as the maker meant it to be seen when it came from his hand.* After he

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to rede in | but for to gyue fayth & byleue that al is trewe that is conteyned herin | ye be at your lyberte | but al is wryton for our doctryne.—Caxton's preface to the *Morte D'Arthur*.

has made acquaintance with it, he must be got to know its parts, and to know *about* it. Let us see how this works out.

Appreciation

To "appreciate" is, first, to set a value on a thing, or to examine its claims to be valued; secondly, to set a high value on a thing, for good and sufficient reasons. *Appraise* and *appreciate* are different forms of the same verb. It is no small thing to have got your pupils to like a fine piece of literature, a book, a passage, a line, a phrase. You have placed in their possession at all events a standard of comparison. You have to a greater or less extent, enriched their thought; and therewith, pretty certainly, their vocabulary. Shakespeare's vocabulary is richer than that of any other writer.

But this alone is not enough. To be most fruitful, appreciation should be critical; that is, there must be judgment, and ground for judgment. As a pupil grows up, he must be taught to examine the mechanism of literature, and to discover, so far as discovery is possible, the external qualities by virtue of which a great piece of literary art acquires impressiveness.

It is perfectly true that when we have exhausted all our criticism and made all our discoveries, there remain still in great literary work those impalpable suggestions and those inexplicable strokes of insight that cannot be analysed. But we must not therefore forbear or shrink from the endeavour to analyse a rhetorical effect into its superficial causes, if we can compass such analysis. The discoverable use to which genius puts rhetorical devices need not make us think less respectfully and reverently of its work; while, on the other hand, the careful examination of the modes of expression used by a great writer to produce a certain effect reacts at once on our own power of expression as well as of general appreciation.

Rhetorical and grammatical analysis

Rhetorical analysis is not grammatical analysis. The purpose of speech is first to inform, then to persuade. Even the poet who writes his verses and then secretes them in his desk addresses himself to at least an imaginary auditor, in order to inform or persuade him. By what devices, then, does the writer whom we are studying secure that his information shall be clearest and most telling, his persuasion most effective? Rhetorical analysis helps us to find out at all events the more mechanical artifices of composition, and to remember them by giving them names. Grammatical analysis enables us to understand the formal relation of word to word and of clause to clause, but no more. When we read a great author in the spirit of rhetorical analysis, we know, of course, that he did not set out on his task with a Treatise on Rhetoric before him; but we can only avoid conveying that impression to our pupils if we take the precaution of seeing that they have mastered the *general* contents of their book *before* proceeding to its parts. Our admiration or appreciation of beauty and force that we cannot define in great work should be all the greater when we have learnt the most that we can by rhetorical examination. Each kind of great work has its uncapturable qualities; its fancy, grace, insight, majesty, eloquence, and the like. But their whereabouts and some of their modes of action can be detected by those who know what devices tend to what effects, what are the main lines of style in poetry and prose, what the figures of speech and their results in stimulating emotion. This knowledge, again, tends directly to strengthen the power of composition. Com-

Rhetorical analysis and composition

position at every stage is the exercise of intelligent, intelligible, and consecutive expression. A child "composes" as soon as it speaks; for thought is, in its very nature, composition; and speech is thought expressed. The cultivation of the power of consecutive expression may be begun as early as you please; indeed, it *must* begin before any analytical grammar whatsoever. Happily, mothers are still sufficiently uneducated to let their children learn to speak before they are taught to pick out nouns and verbs from sentences; and the children begin to learn "composition" at—nay, *on*—their mothers' knees. The suggestion that "composition" should be taught only after some analytical grammar has been taught is a flagrant instance of the vice that delights in sealing up "subjects" of education in water-tight compartments. It is an unpardonable violation of the principle of connectedness.

Answers in complete sentences

During the actual process of teaching, it is mere pedantry—and impracticable pedantry, too, as we have seen—to insist on every question being answered in a complete sentence. But note: as an occasional exercise with young pupils this practice is useful and even necessary, the need however being distinctly greater if the children come from a slow-thinking class, from homes where they hear little intelligent general conversation and are therefore less "quick at the uptake". From such children you do not expect rapidity or nimbleness of thought, and therefore no great harm comes from a fairly frequent use of the exercise; but it must not be exacted invariably or too often. For all children it is one of the paths to composition under two conditions:—the first, if it is used in the lesson designedly devoted to composition, and the second, if a child is also called upon to recapitulate the substance of a lesson both immediately after it has been given and also after some interval, in a series of sentences *Speech* in complete sentences, if you like; but no uniform insistence on *answers* in complete sentences.[1]

Every lesson that lends itself to such an exercise should be recapitulated orally by one of the class. Children in secondary schools may well be expected to write down summaries for themselves from their eighth or ninth year; before that, the "composition" (that is the recapitulation of the lesson) should be built up on the black-board by contributions from the class. Pupils of primary schools, for reasons already given, will remain in this latter stage longer than others. The composition lesson proper will follow the literature lesson and the lesson in rhetoric that accompanies it. Pupils may be called upon to write a page, making use, if possible, of certain figures of speech discussed and explained, on matter, if possible, arising out of the literature lesson, being taught to avoid the characteristic defects of each figure. In the earliest stages we are content if pupils use *and* and *but*, *he*, *she*, and *it*, correctly Another stage is the use of the relative. Then come sentences containing subordinate clauses. An intelligent pupil of thirteen should be able to expand a metaphor into a simile, and a little later to construct metaphors out of similes. At fifteen he can be taught to marshal his information in

Composition

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[1] This heresy of the complete sentence we get, like so many other more useful things, from Germany; and we have most warmly adopted it just when Germans are beginning to laugh at it even in their comic papers "Will you marry me?" asks a Professor in a well-known German *Punch*, addressing himself to the lady of his choice "Yes, by all means," says she. "Pardon me," the swain replies, "let me have your answer in a complete sentence."

logical order and to use safely other simple figures such as antithesis, climax, metonymy, and the rest.

Paraphrasing is of great use *if sparely used.* It is however most undesirable to set for paraphrase a passage which expresses a great thought in form so perfect as to be "inevitable," beyond improvement. Nothing whatever is gained by the endeavour to turn what we feel to be perfect into comparative meanness. But in the elucidation of a crabbed passage or of an occasional phrase which lends itself to expansion without sacrifice of noble form, paraphase may be used with much profit. The exercise however should always be set with a caution and an apology. We must make sure that our pupil does not regard a paraphrase as merely another way of saying the same thing, a way as good as the author's. If we leave such an impression, we may easily poison his mind; we go far to destroy his reverence, that respect which the cultivated person conceives for persons or things just because there is in them something great, beautiful, or lovable, which is theirs inalienably and not, as he feels, within his own power of achievement. Those mean spirits to whom nothing is admirable, who affect to regard even great things as matter of mechanism, are simply deficient in the sense of proportion; they themselves are, in their own conceit, too big to condescend to admire. We ought to be cautious therefore not to give our pupils any excuse for suspecting that a noble idea nobly expressed is merely one way among many of dressing up commonplace.

Paraphrasing

Literary interest is, at bottom, an interest in man. We are first of all interested in his doings, then in his thoughts. When we are children, it is action that fascinates us; as we get older we know that the thought, the thought sometimes expressed

The source of interest in literature

in the "winged word," is the truer life of man. This is why young people and people who remain young love romances, and why people who know the world and have thought about it find their highest literary pleasure in works that deal with action reflectively.

A very little child does not care for action which it cannot well realise; that is why infants prefer, of all stories, stories in which they themselves are made to figure. Imagination grows, they acquire simple notions of goodness and naughtiness, and then they love to hear of grotesque personages, of unlimited might and stupendous personality, fairies, giants, dwarfs, good or bad. The world is not yet for them a system of causes and effects uniformly concatenated; and if you tried to make it so, you would find that their experience of details is too limited; they will not believe you, though your folly may appear to win a superficial assent. You must proceed gradually by helping them to recognise in process of time the usual order of events, and in the meanwhile cultivate their taste for letters and humanise them by making them familiar with the fancies and traditions of those who have gone before them. This is the justification of the use of the fairy story and the epic — both, we see, on the grand scale — as instruments of education. Providence is the real hero of both fairy story and epic; in both fairy story and epic the providential end is reached by grotesque and monstrous means; less grotesque and monstrous and more rational in the epic than in the fairy story; but the end is reached. In the fairy story the personages are interesting because of their grotesqueness, in the epic because of their size, their heroism. The epic is the more advanced taste, for its actions and characters are less amorphous, and the child's appreciation of goodness and badness is

Fairy story and epic

growing more definite and conforming itself gradually to the adult standard; he wants less chaos, more order. This is the period during which we should teach the great world stories, the Homeric, Vergilian, Germanic sagas. Between this and the next stage come the semi-historic ballads, still epic in form, the personages large and heroic, and performing impossibilities; but having a faint background of fact, and easily connected with the lessons in recorded history. It matters little that fiction forms their bulk; the fiction only makes them more interesting, and the child gets with them what is positively truer than any narrative, and that is something of the *contemporary feeling* of the historic age of composition. When he reads the sober narrative history, he will have the better atmosphere and will understand his text the more surely.

Science is no substitute for the fruitful wonderment of fairy story. The "fairy land of science" is not at all wonderful to a child. He turns away with just disdain from the phonograph, and electric telegraph, and bacteria; they are no marvels, especially if we try to "explain" them. But *Jack and the Beanstalk* is quite another thing. No explanation of this convincing history is possible; and if it were possible, it would be impertinent.

The epical histories

The next stage is the history; not the text book, but the writings of the statelier historians, Clarendon, Gibbon, Prescott, Macaulay; read, not for the training in historical method, of which we shall speak hereafter, but purely to cultivate a sense of spaciousness and style. This is the period at which a pupil reads the historical speech; Burke, it may be, or a more modern master of political eloquence, such as Bright or Disraeli or Gladstone. When our pupil has worked up to this point, and has had concurrently lessons in rhetoric and in the practice of rhetoric, that is composition, he is

Poetry

fit for the closer study of more complex forms of literature, and, in particular, poetry. Poetry the pupil will have had from the beginning, though it may have been poetry in the form of prose or ballad. He will have learnt much ballad verse and some lyrical verse by heart; but he ought, at sixteen, to make a serious attack on prosody, and, in order to learn the difficulties and respect the achievements of the great poets, he should be occasionally called upon to write English verse himself, in the style of the particular poem which he is or has been studying.

It is not easy, it is not even desirable, to draw up an exclusive list of authors for the last three years (sixteen to nineteen) of school life. But it may be reasonably required that a good deal should be done with the very greatest writers of verse, and always with particular emphasis on prosody, for the cultivation of the ear—Shakespeare, Milton, Gray, Wordsworth and his contemporaries, must all find a place. It is equally important that some great contemporary or comparatively recent poem should be read and known well, in order to keep alive the sense of continuity, reality, and modernness.

In every one of these stages it is important that the study should be the study of literature, and the result most desirable is that our pupil should know some great works well and should find fervid pleasure in them. The pleasure will be the greater when, after all the study, the great writer still keeps the secret of his influence; and when we find that, with all our rhetoric, we have only learnt a few of the devices that move us to admiration for which we can account in terms of the schools. Indeed, the proof of the greatness of the greatest works is that every time we come to them we discover that there is yet more in them than we had felt before; and that is why we never tire of them. Mark, too, that if we do not plant a taste for good literature, and especially for good verse, during adolescence, we cannot hope that it will sow itself later in life. We never forget the things that have in youth warmed us with delight, and the pleasure in noble thought and subtle expression is second only in purity to the pleasure inherent in unselfish action Base pleasures also trail behind them a craving for repetition, and we must fight them with the delight of nobler experience. Adolescence is the period during which the deepest spiritual impressions are made for good or for evil; and not to use fine literature, portable and accessible as it is, in order to fill the place which lies open then to spiritual influences, is to throw away the most powerful instrument of good education.

It is well to remember that for every stage of education there is to be found appropriate literary food and training in what William Allingham calls "verse-poetry". The delight of the ear in verse-effects is ultimately unanalysable, but those who would prepare the young wisely for life should begin early to lay up in their minds incorruptible stores of good poetry. "Babes love the sound of it, youth passionately delights in it, age remembers it gladly; it helps memory, purifies and steadies language, guards elocution; it gives wings to thought, touches hidden verities, can soothe grief, heighten joy, beautify the common world, and blend with the divinest aspirations."

If a pupil has passed through such a course as we have here in outline, he will have achieved two great things: he will have formed the habit of critical appreciation and he will have a standard of taste for life. He will also be well fitted for further systematic work, at the universities or elsewhere; although, as the Literature Schools are mainly taken by women, perhaps for the neutral He I should here say rather the exclusive She.

Literature and History

It is no doubt desirable to correlate history and literature studies as much as possible. But it must be remembered that literature is not the same as history, and that the training of the power of literary appreciation, though all the easier and all the truer if we can get pupils to realise the far-off setting and atmosphere, is primarily a training in feeling, or "aesthetics". We are not therefore to exclude King Alfred or King Canute from our histories merely because we cannot ask our school population to master the contemporary speech of those heroes; nor are we to forbid *Gulliver's Travels* to our children merely because the book treats of politics in a fashion far beyond the comprehension of the little boys and girls who take most delight in it. On the other hand, wherever history and literature can be made to illustrate each other, the teaching of both gains enormously in true and permanent effect; and when the last stage of school life is reached, it is of the greatest advantage to read history and the contemporary literature side by side.

We must remember again, that, though excellent in itself, the study of the History of Literature is not the study of Literature. The study of literature (let us say it again) is a training in appreciation, in aesthetics; and the history of literature is history, appealing mainly to the memory. We can cultivate a literary sense, to be a refining influence and a pleasure and possession for ever, while imparting little or no knowledge of the history of books and the influences working to produce them; though it is emphatically true that the appreciation is sounder and truer when it is correlated to an exact knowledge of each thing.

The History of Literature, then, should, certainly till the last year of school life, say eighteen or nineteen, be used in detail merely when it is necessary to get a correct environment for the work under consideration. For instance, an intelligent study of a play of Shakespeare should reasonably include (but as subsidiary to the aesthetic study) some knowledge of the way in which plays were produced, the events of contemporary history necessary to explain the text—and not much else in the "historical" side. It does no harm, indeed, to make a pupil in an upper form read (though not commit to memory) a short History of English Literature; but anything like a detailed study is surely better left to a time when wider reading will have given the pupil something real to work upon. It is worse than useless, it is distinctly injurious, to set young people to learn dates and lists and gorgeous criticisms concerning works of art with which they have no acquaintance. It cultivates literary hypocrisy and pretentiousness, and is an obstacle to real reading and the saturation which is the chief thing necessary. Of course, it is desirable that our pupil should learn to use a History of Literature for reference; indeed a great deal that we try to impose on the memories of our pupils, in more studies than this, is better left to be looked for when required. It is precisely this power of profitably using books of reference which the children of so many of our schools lack, the efforts to teach them being divided mainly between telling and "eliciting".

At every stage our pupil should be required to deal at length, both orally and, as we advance, on paper, with part of the subject matter treated in the lessons; and subjects should be so prescribed that, without being too recondite, they may frequently involve some little research and consultation of authorities, with room for the free expression of individual opinion. At the top of the school, pupils may be encouraged, as they are in France, to get up some special point for oral exposition from the teacher's chair, to the class. The first shyness is soon overcome, and the practice once started is most stimulating and suggestive.

The History of Language

The history of the English language is not literature, but it is an undoubted fact that we appreciate literature the better if the language is felt to have a continuous existence and to have its roots far back; and so much of our finest literature is more or less archaic, that some knowledge of the structure and nature of the growth of English is indispensable to a proper enjoyment. But the scientific study of language is as truly a "science" as the thorough investigation of any other complex physical phenomena; and not memory alone, but reasoning power too, is called into play. Historical Grammar and the History of Literature go together as illustrating and helping to constitute history proper, but the school cannot be expected to go very far with either. "History" is in the main social and political history; the history of literature illustrates these, and is in turn illustrated by the history of grammar and the like.

Preparation for University study

Miss Wardale says that "the ideal preparation for University study at school would be as much sound training in English grammar and Latin as possible, and a little special work at Old English grammar and translation for perhaps the last year. Failing this, some Chaucer would not be difficult, and would be helpful in bridging over the gulf between

Modern English and that spoken before the Conquest." But the first alternative must be the course for those who are to specialise, in pursuit of a degree. For the ordinary pupil it may be admitted that the outlines of Historical Grammar, with or without the Chaucer, is all that our curriculum allows us. On the claims of Latin we shall have something to say when we come to our chapter on the Classics.

Incidental teaching

Incidental teaching in morals, love of country, and the like, may well centre round the literature lesson; but any ostentation, any display of set purpose in such teaching, is the surest way to render it ineffectual. No teacher lacks opportunity for the teaching of morals; but the literature lesson covers so much ground, may bring up so many topics in the ordinary course of work, that it must needs touch the pupils in many different ways. A few words during the lesson on a character or a sentiment should be a powerful sermon, and for this reason it would seem to be desirable that whatever other subjects are assigned to specialists, every form-teacher should qualify himself to superintend the lesson in literature in which opportunities for this so often occur. One may be excused for distrusting the multiplication of specialist teachers in schools *praeter necessitatem*. By this practice we get a large number of persons all acquainted with a small part of each pupil; and it would therefore seem to be a sound principle to assign "the ordinary English subjects" of one form as much as possible to one person. The great teachers have been people who taught more than one subject to their pupils, and had thus many lights on each individual character, and means of cultivating a many-sided personal interest. And we may go farther, and say that no one is properly qualified to teach

No specialists for English

any subject without a strong tincture of letters, if only because a literary sense is one of the most powerful of impulses to a multiform sympathy.

Morals and patriotism in literature

Set lessons on morals, love of country, and the like may be ineffectual and worse. A class will regard them as pretence because they lack the reality which comes from circumstances of immediate application. Even sermons to adults, delivered solemnly in sacred places, often fail to produce their effect because there is nothing, saving the eloquence of a preacher, to bring them home. But the morals of the story of Washington and his father's apple-tree, and of Hamlet and his indecision, are effective in their vastly different ways and for pupils of different stages, because circumstances, that is the interest of personality and action, give them life. Love of country may be stimulated by a very few words after you have read Herodotus' account of the battle of Marathon, or the fine apostrophe in Shakespeare's "Richard II.," to pupils of different ages. But if you teach a blind reverence for a name or a flag, however eloquently, you sacrifice the substance for the shadow, and you may pervert patriotism into mere unreasoning prejudice. This preaching of conduct or morals without immediate application does indeed make pedants and Pecksniffs. Children learn a cant as quickly as their elders; and unless we can point our moral from a historical or contemporary fact which is real to them, they may learn the language of virtue without its practice.

Text books

Under ordinary circumstances, the best text book that the accomplished teacher could prescribe for his class would be one without notes. He could then make sure of two conditions essential to a rapid first-hand knowledge of the book studied: that the book itself would be read, and that he could securely direct the attention of his class to the points which they ought to notice, undistracted by learned notes on matters of little relative importance. If notes must be used (and it is to be feared that most teachers are too diffident and some too incompetent to dispense with them), then the briefest are the best; and, of these, those that tell students where they can get information if they want it. "Introductions" and notes alike should be read *after* the book has been once publicly read and discussed on general or aesthetic grounds; its general meaning, its various parts, its arguments, its characters, and so on. Then, having so comprehended it, let the class take the parts themselves to pieces, and set about mastering the text and all the lore which their examiners are likely to look for. The process, *mutatis mutandis*, is the same in all stages; first the general idea, then the parts, then the exegetic details. But always, where our class is likely to profit by it, let us use the text for lessons in rhetoric and "composition," graduated, of course, according to the capacity of the class.

The school library

The school library will vary in constitution according as we are providing for pupils found in the primary grades or other grades above them; but one principle may be laid down for all—they should be a little way beyond the strict standard of school. A library that is made up of books just on the level of those who have to use them will fail in one of its chief purposes, the suggestion of a field of attraction beyond the customary commonplace. Thus, if your library contains novels and romances, as it should, they should be specially selected so as not to represent the sort of literature that boys and girls find most commonly ready to their hands in the periodical literature which is easiest of access. This principle goes farther than we suspect. It is from the reading book that is just a little hard for him that the primary scholar learns most. If you write down exactly to his level, you deprive him of the advantages which the children of another rank get by wholesome "browsing," which is profitable to them exactly because much of it is beyond them.

In the primary school, however, teachers have to consider as paramount the necessity for cultivating in their pupils a taste for any sort of reading at all, a problem of much less consequence in the secondary grade—speaking, of course, generally. In the primary school, therefore, the library must be mainly books of the more obviously interesting kind, story books. All boys may be got to love Scott, Stevenson, Blackmore, some Marryat, Besant Dickens, some Fenimore Cooper, some Mayne Reid, Charles Kingsley, and Tom Hughes, some Haggard, and with a little encouragement even Thackeray. This encouragement of book-reading is the most important service performed by the library of the primary school, where the traditions and methods so often keep the children from first-hand acquaintance with real literature. But even the primary school should have its real it modest supply of books of reference, dictionaries of various sorts, larger manuals of history and geography, and natural history, geology, physics, chemistry and the rest, to which pupils should be referred occasionally for information and which they should be warmly encouraged to use. One type of a bad school-book is a book that explains everything.

In the secondary schools the implanting of a taste for reading is of less pressing importance because their pupils will be more likely to get the books and the opportunity for reading in their own homes. The point to be secured here, in stocking the library with the lighter prose literature, is the inclusion of nothing but the best, and the choice should be determined either by a specially qualified member of the school staff or a vigilant committee. You would not include all the novels of all the authors just mentioned, and you would add a hundred names here omitted.

Secondary schools, according to their grade and respective resources, should consider a library as an indispensable part of their equipment. Circumstances must determine whether the school requires a copious supply of novels and romances in its lending-library, but there can be no doubt that as many of the best and latest books as possible, of real authority, should be placed handily for general use. Even if the collection must needs be a very limited one, such a stock may well be expected to make the ordinary work of the school more real by connecting it with the great work done elsewhere, to light here and there the sacred flame of original individual interest, and cultivate a taste for sober reading. The library, indeed, takes up the teacher's task at the point where the teacher must needs leave it, where the pupil is left to himself to make his own investigations and face his own difficulties. It stands midway between the intellectual training which the school undertakes to give, and the merciless experience which a man has to look for when he gets into the world where there is no help or guidance.

Formal Grammar

Formal Grammar has sometimes occupied far too large a space in school teaching. It has been a singularly arid study, perhaps largely because it has been the stronghold of the vicious old method of "teaching rules," the abstract and general before the concrete and particular. It may be safely affirmed that unless in the study of grammar language is treated like other material about which we ascertain laws (that is rules, generalisations) by induction, then it fails to have its due effect either as a gymnastic or as an art. Formal Grammar is an investigation of the usages of language, of the laws or rules followed in combining words into sentences. It does not teach us how to speak, but it may tell us how to avoid formal errors in speech by analysing for us correct and incorrect schemes of speech, either word for word, or clause for clause. Its purpose as a science is to discover the rules determining the order of words meant barely to convey information: its purpose as an art is simple propriety, that is, the prevention of incorrect ordering of speech; its purpose is not "composition"; not clearness, nor force, nor elegance—these belong to rhetoric.

We could, indeed, teach the body of formal English grammar to English pupils at a very early stage, for the "rules" discoverable are few. A fairly intelligent class averaging eight or even seven years of age, by the use of such inductive methods as those set forth in Abbott's *How to Tell the Parts of Speech*, or in Fitch, chapter ix., should easily learn how to tell the parts of speech and to parse sentences in the course of a year's work. No books and no "exercises" are needed if the black-board is used faithfully. There should certainly be no formulation of rules or definitions followed by "examples". If pupils can be got to generalise by themselves from the examples which you present to them, they learn a good deal more than formal grammar. To be sure, we must supply them with names for the families of words that they discover, but we must not begin by naming or defining for them. In this way, the grammar lesson, so dull and tiresome to most children, may bring with it all the delights of scientific discovery, for speech is, after all, not less interesting as material for investigation than flowers or chemical compounds; and the material and apparatus is a good deal cheaper than those needed in the study of botany or chemistry.

But formal grammar and grammatical analysis, as regular parts of the curriculum, can and should be dropped, for every pupil, at the stage at which a formal study of the grammar of a classical or modern language is begun. It would seem desirable to get the formal grammar over early rather than late, because it is quite easy if taught inductively, it is exceedingly interesting, even to the child of seven or eight, if so taught, and the classification of words according to their function is both a fine gymnastic in itself and one of the best means of teaching young pupils the meaning of scientific classification in general. The American Committee of Ten would postpone grammar teaching of this sort until the twelfth year, but for the reasons here assigned, this would seem to be undesirable. Of course, all through the study of books, appeals must be made again and again to formal grammar for elucidation and comprehension of passages otherwise obscure; but it should never be forgotten that people can and do learn to speak and write good English with little or no aid from this study; and it is certain that some of the writers of the noblest English could not parse or analyse as well as most children in the sixth standard of a public elementary school.

For pupils who are to learn Latin, procedure will differ from that followed in the case of those whose analysis of grammatical form is likely to be confined to modern languages. In the case of the former, conjugations and their nomenclature are of much less importance, and formal grammatical analysis may be safely reduced to a minimum. On the other hand the simple analysis of an English sentence is undoubtedly not without use as preparation for the disentanglement of a Greek or Latin complex sentence. For instance, the pupil who has learnt the secret of the Noun-Sentence in English will be less puzzled at the behaviour of "Accusative and Infinitive" construction in Latin; and the early habit of analysis will certainly make *anacoloutha* less distressing experiences than they would otherwise be.

But as soon as possible this exercise of grammatical analysis might with the greatest profit make way for logical analysis and the elements of formal logic, if only because the study of formal logic helps us not merely to speak with propriety, but to draw inferences justified by what has gone before.

Something must be wrong if it is true (and it probably is true) that thousands of the children in our schools can "analyse" admirably in the grammatical sense, but cannot construct a single periodic sentence correctly or detect a simple fallacy in argument. Grammatical analysis is an excellent tonic and test—a tonic if it teaches the pupil to avoid an unnecessarily complicated style, and an excellent test of simple accuracy where a construction appears to be involved and obscure. But to become a permanent or even prolonged part of a school scheme, a study should *lead* somewhere. If grammatical analysis is given too large a place, to the exclusion of a more copious practice of synthesis or "composition," it does more harm than good, for it seems to become an end in itself and a meaningless gymnastic.

For reference:—Laurie's *Lectures on Language and Linguistic Method*. Whitney's *Language and the Study of Language*. Glazebrook in *XIII. Essays* (Percival). H. Courthope Bowen *On*

Teaching English. Abbott's *Teaching of the English Language.* Gow's *Method of English.* Messrs. Barnett and Martin in *Teaching and Organisation.* The *Report of the* (U.S.) *Committee of Ten.* Harris in *Report of* (U.S.) *Committee of Fifteen.* Miss Lumby in *Work and Play in Girls' Schools.* Messrs. Beeching and Allcock in *Essays on Secondary Education.*

CHAPTER VIII

LATIN AND GREEK

A soldier's work lasts for an age, a scholar's for ever.
—ROBERT BURTON.

The antiquity of the study of the classics

OF all the branches of study pursued in school, Latin and Greek have left their marks deepest on the character of English education. They have not so long a past as some other subjects, considered as a part of general European education. To Plato the beginning of all wisdom was geometry; and the contemporaries of Plato felt themselves under no obligation to learn foreign tongues, or to do more than master their own traditional literature and acquire the art of talking. But Greece in captivity conquered and civilised her captor Rome, and a century after the defeat of Philip V. of Macedon every Roman gentleman learned Greek as a matter of course. In the time of Cicero Greek was much more to the Roman man of affairs than even French is to us; more truly speaking it occupied the position taken by French in relation to Scotland of the sixteenth and seventeenth centuries. But with the rise and development of the Christian Church in the West, Greek, oddly enough, had to give way to Latin. The earlier Christian writings and controversies had, of course, turned on Greek writings and the interpretation of Greek texts and doctrines formulated in Greek; but the separation of the Eastern empire from the empire of the West, the ultimate separation of the Church towards the end of the fifth century into two distinct sides, one with its centre at Constantinople and the other at Rome, naturally promoted the use and growth of Latin in the West at the expense of Greek.

The triumph of Latin

Christianity and empire together being once established in Rome, Latin there became the chief language of controversy, of exposition, of prayer, as it had so long been of business. It is worth while to remember that the first book ever printed—long afterwards to be sure—was the Vulgate, the Latin version of the Scriptures made at the end of the fourth century by St. Jerome.

Now the Church was the one society in the welter of West Goths, Franks, and Burgundians, which preserved the tradition of a great common central organisation, whether it was protected by a Catholic like Clovis in Gaul, or an Arian like Theodoric in Italy; and with its common tradition it conserved also the literature, forms, and formulas of Roman origin. It is true that when Romans combined with those whom they found in possession to form the "Romance" nations, new languages ultimately sprang up in common use which were neither Roman nor native, but something made up of both elements. On the other hand the teeming Goths and other Teutons were captured spiritually and morally by the Romans who came under their nominal sway. These Romans long kept their own language and their own laws, the clergy being necessarily Roman because the Romans had more learning and a longer tradition at their backs. And in the midst of the vulgarising of the older Latin into the later Romance spoken dialects, the clergy and other men of learning preserved good Latin for general literary purposes, just as to this day literary Arabic and spoken Arabic differ from each other. Now Christianity being based on a historic tradition and its western centre being Rome, it is obvious that the clergy would scrupulously preserve the Latin of the early organised Church in, their religious services as in their religious literature; and the tradition abides with us to-day. The central and most significant of all Roman Catholic religious ceremonies must still, the whole world over, be performed in Latin.

Latin then was first established as the language of learning generally, being of course incomparably more fixed, polished, and stately than the unstable dialects of the Teutons; and secondly it remained the language of the Church because the Church was Roman. These two influences maintained it for literary, political, and ecclesiastical purposes in every part of Europe, even so late as the days of the English Commonwealth; for every schoolboy knows that Milton was Cromwell's Latin secretary. Latin was the current language of the universities and of the schools, for both universities and schools were for centuries mainly great theological establishments and nurseries of theologians. Books that were meant to live were almost invariably written in Latin; and as late as the time of Bacon, Latin still occupied so commanding a place as the repository and instrument of learning that the great philosopher hastened to get what he regarded as his greatest work translated into Latin, so that his contributions to philosophy might not share the decay and oblivion which he was convinced were to be the fate of books written in more modern tongues. It is true that some history and some poetry of first-class importance and destined to a long life, were in later medieval times written in English and in French, but the traditions of learning and the long supremacy of the Latin Church still maintained the language of ancient Rome in a commanding position.

The revival of Greek and its stimulus to the study of Latin

Greek in the meantime was almost forgotten. Greek scholars were rarer and rarer until the fall of Constantinople and the break-up of the last vestiges of the Eastern Christian empire scattered learned Greeks over Europe and stimulated a study of their language amongst the Rome-shadowed nations of the West. The Greek tongue could never, of course, displace the long-established Latin; and it actually gave the Latin more importance, because it set people comparing the Roman authors and authorities with the Greeks from whom they traced much of their origin, material or spiritual. Greek was taught with Latin in most of the universities of Europe, and acted as a powerful solvent in modifying and stimulating to effectual ends the opinions of religious controversialists.

But the world was long unable to emancipate its literary instincts from the influence of the Latin tradition. The supreme greatness of the Greek literature was, in any general sense, the discovery of the eighteenth and nineteenth centuries. The restrained, often imitative, and even somewhat narrow Roman literature was much more to the taste of our forefathers than the bolder and more spontaneous writings of the Greeks.

On the other hand, the place occupied by Latin, and assured to it by immense achievements as the language of the people of the greatest administrative capacity known to the world, is almost in itself sufficient justification for the preference accorded to it as a subject of study. Knowledge of Roman history and affairs of Roman personages and statesmen had been continuous and was on continuous record. There had hardly been a break, too, in the continuity of Latin literature, either as poetry or philosophy. So Latin maintained itself in the schools, and gave only a grudging place to Greek right up to the beginning of this century, when a sounder literary instinct and revolt against the medieval tradition raised the estimation of Greek literature to the higher place that it properly occupies. But though people were not unwilling to admit the literary and philosophical superiority of Greek, Latin still remained the more important school study. Let us see why.

Latin the more important for school

First of all consider its established place as a school subject. It had never left the schools. The "grammar" schools were the schools where *Latin* was taught. Text books, such as they were, were Latin, and the Latin grammar written in Latin survived to our own day. In the next place, consider its position, already noted, as the universal vehicle of literature. Bacon, as we have seen, speaking *urbi et orbi* and writing for all time, deliberately chose Latin, and though after Bacon's time the rapid development of national literatures was promoted by the continued ferment, intellectual and social, which began in the revolt against Latin Catholicism and extended in subtle forms even over Catholic societies, yet the literary purists still harked back, all for illustrations and some for their models, to Roman writings; and Latin was still therefore the educated man's chief possession. Nor, in the third place, was it a small matter that the Romance languages in their earliest forms, and the Teutonic tongues (English notably) in their borrowings, were so deeply indebted to Latin. A knowledge of Latin was clearly, if not the key to a knowledge of most European tongues, yet oil to the lock; and though philology was ill understood—nay, for that very reason—the significance and importance of Latin "jumped to the eyes". The philologists of the seventeenth and eighteenth centuries not only recognised the old services of Latin, but dragged it into further use in defiance of philological laws which later generations were to discover and formulate. Again, there is a fourth reason to justify the old place and dignity of Latin. Not only literature as such, but the nomenclature of the sciences also was largely based on Latin, just as, when Latin gave out, in later times it has been supplied largely by Greek. We still profit by this plan. The chemists and physicists of London, of Paris, of Berlin, and of Rome, use terms in describing their work which are either identical or recognisably similar. The language of theology and philosophy, the sciences earliest current in Europe, was Latin before it was Greek; and though we have added largely to the connotation of the early borrowed words, we are still driven for scientific philosophical nomenclature at least as much to Latin as to Greek.

The dead languages, moreover, just because they are dead, are particularly useful when we have to make new words to express novel ideas or things. Because they are dead, the new term can be made more restricted and precise in its meaning, freer from ambiguous current associations, than any term we could transfer from speech still used and therefore still changing in connotation. But the seventh and final reason for the position assigned to Latin in the schools seems to be stronger than all the others. The dead languages of Greece and Rome are the unalterable records of the past, social, political, and religious, which constitutes the main basis of the existing western civilisation. The seventeenth and eighteenth centuries were inclined rather to take Greece and Rome as models, having in some respects themselves maintained the exclusive political and social traditions of antiquity, and not recognising, as we must do, the gradual modification and evolution of societies towards a presumably higher type. No doubt, Greece and Rome still provide us with copious instances of error, if not of models of political and social propriety; but their value for us lies precisely in the facts that, taken altogether, they are a stage on the way to the higher type which we may expect civilisation to evolve, and that we cannot understand and properly estimate our own position unless we recognise and respect their contributions to the civilisation which we received in so great measure from them. But it is easier to understand the relation of Rome to modern civilisation than to understand the relation of Greece, which is, at least in point of time, a stage farther removed. It is natural therefore that the traditions, history, and literature of Rome should have the first claim to be noticed and should have taken firmer root in the schools.

Claims of the dead languages to-day

Let us see whether any of the conditions that operated to give the dead languages, Latin particularly, such a commanding position in education are in operation in our own day; for although there may be good practical reasons for abandoning these studies, we ought to be quite sure that we are not losing in the process something of enduring value.

We are required first of all to take into account the position which centuries of use have established for the study of the languages of Greece and Rome in our schools. We cannot, even if we ought to, shake ourselves free from such long associations in the course of a generation or two. It is a valid argument in favour of the pursuit of any branch of knowledge that "most educated people" are familiar with it. The best parts of life are not necessarily the pursuits which provide our livelihood; social sympathy and the grace and ease of social intercourse are matters of real and abiding importance. On the other hand, Latin and Greek derived their early importance from distinctly practical considerations, and with great material discoveries come also new ideas of life. Philosophical science, for instance, has demonstrated the vast importance of the process of evolution in relation to all things human, and attention will therefore be more closely directed to such pursuits of physical investigation as those which established the value of the evolutionary theory. Persons of education thus attach less and less importance to the old training in classical letters.

We must therefore admit that the claims of Latin and Greek on the grounds of their established position become less pressing. For the theories of development by which we are all sensibly or insensibly affected weaken the hold of the past upon us, and direct our view forward rather than backward. Authority is less, unauthorised discovery is more.

The ancient languages are no longer the sole or the chief or even common vehicles of literature. Be it for good or ill, we have seen that traditional authority appears to have less weight than heretofore, not in science only, but in matters of opinion also; and the languages in which authority spoke its mind, and to which it was necessary to go in order to learn that mind, may be of less moment than the more modern tongues with their newer associations.

And yet the very immobility of classical Latin and Greek is a point of exceeding value. Some people still think that the first great discoveries and generalisations of morals and politics (not to speak of religion, which will have its special importance for millions) are best expressed in the simpler and less ambiguous speech of the dead Latin and Greek. It is probably to some extent an instinctive appreciation of this that has preserved for Latin its place in the liturgy of Roman Catholicism, which thus affirms a primitive unalterable basis for right conduct and religion for all people alike, under all skies, and in all circumstances. On a like ground, too, most Jews all the world over conduct their worship in the tongue that first gave expression to their religious ideas.

Latin and Greek are still useful for the general study of languages, both practically and philologically. Under the first head, Greek is of far less value than Latin. Latin is undoubtedly a very direct help to the acquisition of all the Romance languages — French, Italian, Spanish, Portuguese.

For a knowledge of Aryan philology (if Aryan is the right word), both are absolutely indispensable; and philology is a branch of natural science properly so called, of exceeding importance as subsidiary to history and sociology. On these considerations it is needless to dwell.

Latin and Greek are indeed useful for nomenclature, but no very extensive knowledge of either as a language is necessary to this end. At the same time, the point is a respectable argument in support of those who would maintain that at least Latin is valuable in education, even if no great progress is made in the real acquisition of the language as literary expression.

The Greek and Latin classics as literature

But the claim made on behalf of the classics as literature is a very strong one. As an instrument of education the Latin and Greek literatures are valuable on two chief grounds, simplicity and richness. The great primitive masterpieces that have served as models for two or three thousand years are necessarily nearer, as a rule, to the appreciation of young people who are to be trained to understand and like literature than the more elaborate compositions of later days; and they have the incomparable advantage of being mostly the true and spontaneous expression of their times. They are at once the means of cultivating taste and also first-hand documents of history, in which our pupils can make discoveries for themselves.

And for richness, every one of the great divisions of literary composition is represented by some noble exemplars. In point of poetry we have not yet improved, as Matthew Arnold points out in his "Wordsworth," on the classification of poetic composition which we owe to the Greeks; and in every kind the Greeks at least have done supremely well. In point of prose, Greek and Latin historians and philosophers are amongst the greatest of the great, models and possessions for all time.

The classics as gymnastics

We ask, in the next place, whether Greek and Latin are as valuable as they once were for training in logical method. The question however is really whether they are as valuable as other subjects—in particular, the experimental sciences. We may admit at once that as a training in the processes of induction, they are certainly inferior to physical science properly taught in that they do not permit the use of the most valuable of all inductive devices, experiment. Of course it is open to us in language study, as in the study of the applied physical sciences, to draw conclusions from a multitude of instances; that is, to make inductions; but the most valuable form of mental gymnastic provided by the systematic and careful study of the classics is the setting of authorities one against another and the deduction of interpretations from ascertained rules of syntax. As a training in the honest weighing of evidence, the solving of a problem in translation or the interpretation of a Greek or Latin text is of the highest value. And the language studies have this advantage over the applied physical sciences, that the apparatus is cheap and plentiful.

The classics as aids to history

Finally, is the study of Latin and Greek still valuable as a key to the history of Western civilisation? The answer is obvious. It is impossible to know what our civilisation means if we do not understand the nature of the contributions made by Greece and Italy: social, political, literary, legal, religious. Unless we see things in succession we shall have no proper perspective. The social reformer, therefore, the politician, the poet, the historian, the lawyer, the clergyman, none of these, to be masters of their tools, can afford to neglect the classics. They may, of course, use translations, but form and spirit are too closely united in literature to make translations more than a makeshift.

The last three reasons assigned for the permanent value of Latin and Greek as school studies, namely, the richness and simplicity of the literature, its excellence as providing material for training in the logic of discovery, and its importance as the key to an understanding of the evolution of civilisation, these are enough to justify conservation. But we must examine the criticisms commonly made upon the views here set forth

Objections to the classics as school subjects

Objectors will say that the literatures may be admirable, but few scholars arrive at the point of really understanding and enjoying them; and this is a good and sound objection. But the objection can be attenuated by better teaching. If we were to begin to teach Latin and Greek as literature from the first, many more of our pupils would be able to enter into the rich heritage which the scholars of three centuries have preserved for them and which has stimulated and enriched centuries of later literature in all western languages.

Objectors say, again, that the judgment is trained by history studies and the capacity for making deductions by mathematical studies, so that linguistic studies are less necessary for these purposes, and that of course the applied physical sciences provide satisfactorily for inductive training. Well, the study of comparative grammar is a fine training in both inductive and deductive reasoning, but it may be admitted that in the former particular the applied sciences are better than languages. On the other hand, let it be remembered that a great deal of the business of life depends on our being precise in the meanings which we assign to words, and that the evils of ambiguity in language would appear to be most easily and naturally avoided by the careful cultivation of the precise and honest rendering of a Latin or Greek passage in the light of all the limited evidence that can be collected for its one interpretation To the last claim made on behalf of classics, their importance as documents of civilisation, no valid objection can be raised They are absolutely indispensable as monuments and landmarks; and the greatest and best men who have pronounced on civilisation as a process without taking the literature of Greece and Rome into account are to that extent untrustworthy as guides to opinion

Classics must not be deprived of interest in the first stages

But to get all available good out of classics as a regular school subject, certain main points seem to call for special consideration. First of all, we must abandon the memorising of accidence by which interest is so absurdly strangled in the early stages of study. We must begin with a book, preferably with a book treating a story already well known to the pupils. We must proceed summarily, covering ground at first rather rapidly, and cultivating accuracy gradually and in accordance with the pupil's capacity to become accurate. You cannot be accurate if you have no material; you must start your pupil with something to go on. It may be well, no doubt, to start an adult pupil on grammar, but a young pupil should be brought up on a plan nearer that of nature, on speech. For language, ancient or modern, is, in its essence, speech, and not logic.

We must make up our minds that it is waste of time to teach those who cannot get far enough to profit. A school life that ends at fourteen should not be burdened with Latin; but after that stage, even a couple of years at Latin, providing that a real book is used from the first, will bear good fruit, and put it in the pupil's power to go on by himself, which he would never do if he had merely been struggling sadly with grammar and exercises. Teach him language by this study; language first, logic afterwards.

Regressive translation

Translation back into the Latin or Greek of a passage read is a fine exercise in expression, and should be practised from the first.[1] It is far better than the use of any series of exercises artificially systematised on a scheme of grammar, however well graduated it may be, and however skilfully the series may be compiled. But minute philological inquiries and the severer "composition" exercises of prose or verse, though not without value, may take up too much time in the case of those who are not pursuing classical studies beyond their sixteenth year. The cultivation of "taste" and the power of expression can in these cases be satisfactorily provided for by the use of corresponding exercises in English—prose or verse—as complementary to the lesson in Rhetoric.

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[1] Of course an old device, as Ascham witnesses. "After this the childe must take a paper booke, and sitting in some place where no man shall prompt him, by himself, let him translate into English his former lesson. Then showing it to his master, let the master take from him his Latin booke, and pausing an houre at the least, let the childe translate his own English into Latin again, in another paper booke."

Objections to current practices

Let us compare the commoner present practice with what may be suggested as a better way. And note that we should keep our eye on the average pupil, not the most highly gifted; for our current practice conspicuously demoralises or at least wastes the time of the pupil of ordinary ability. It is not pertinent—though it is perfectly true—to say that the best pupils in the great schools are often quite admirable scholars; and that for elegant and exact scholarship, if not for minute and extensive specialisation, our universities are pre-eminent, so long as we select the individuals on whom we are to base our favourable judgment. This is true; but where are the votive tablets of those who have been shipwrecked? Do the nine-tenths of those who fail to reach scholarship standard get their money's worth?

The chief objections to the present method of study are: first, its unreality; secondly, its small value to those who spend only a couple of years in classical study; and thirdly, its exceeding slowness to all but the very best scholars, that is, to those who are not spoilt. First as to its alleged unreality. It takes some time under our present system to convince pupils that either Latin or Greek was ever really spoken. They give an intellectual assent to our assurance, but if they get little beyond the accidence, they are not called upon to *act* on that assent, and do not believe the fact, for people believe only those propositions on which they are called to take action. They have no moral conviction that the language is anything but a clumsy puzzle. I remember well how the dry bones of my Greek grammar began to stir with life when I first took up a Greek testament and found that, with my recollection of the English version, I could make out the meaning. No language, ancient or modern, can be learned *with conviction* until it is learnt as something organic—"apperceptively," in fact.

Consider next the small value of classical study to those who under existing circumstances spend no more than two years in the occasional study of a dead language. They probably begin it at too early an age, nine or ten perhaps, and learn nothing but lists, lists, and lists again —declensions and paradigms, which are not even the skeleton of the language, but rather its unarticulated bones.

And then, again its amazing slowness. For most people, even some proud B.A.'s, have, after achieving their degree and putting their books away, read no author, perhaps no single work, all through; and have in all likelihood compassed at most about half a dozen long excerpts from some well-known writers. At the end of many years, then, the bulk of their knowledge is little indeed.

By what means can we make the most of our lessons in Latin and Greek? Let us set forth some general cautions as preliminaries.

The means of improvement

First of all, as we have seen, we must convince our pupils of the reality of the study by introducing them at as early a period as possible to a real book, and this will be all the easier if only we are allowed to postpone the beginning of Latin until the thirteenth year and of Greek till the fifteenth. The fourteenth, as our American friends have found, is, generally speaking, too late to ensure a profitable beginning of Latin.

Secondly, in the earlier stages, we should make little of the grammar, teaching it rather incidentally than as a separate subject. The main uses of case-terminations may be taught from a series of instances collected, if need be, by the teacher, and laid before the class; but the method of induction would be too tedious to use throughout. A few of the more important syntactical rules may be stated *as occasion arises*, and after the first year the regular declensions or paradigms may be learnt in the orthodox way.

Thirdly, cover plenty of ground and cover it quickly. The possession of a sense of mastery is the only means by which we can ease the toilsomeness which makes Latin and Greek study such a drudgery Our teaching need not become less accurate by the use of this method, but we must give more help and encouragement at first, translating beforehand the verbs and the harder words or hard constructions, aiming always at giving the work a meaning, and supplying our pupils with a vocabulary. Vocabulary and phrases come first, grammar next Pestalozzi formulated this plainly enough, when he confessed in his introduction to his *Science of Education* that at first he "erred in keeping far too closely to the routine of the schools, teaching accurate grammatical analysis, when for this beginning only the principal signs of inflection should have been taught and explained. . . ."

Fourthly, we must not in the early stages aim at the critical mastery of a short text, but rather at cultivating the capacity to translate backwards and forwards, by exercising the class in rendering the original author into English, and back again from the English version into the Latin. "Compositions," or original renderings from English, should not be required till later stages, when the pupil has passed into his sixteenth year; until then we should be content with exercises on the books read.

Fifthly, we ought to insist from the first on the strictest scrupulousness in regard to pronunciation and quantities. Those teachers who have used both the older English pronunciation and the revised scheme (like that at the end of Dr. Abbott's *Latin Prose*, or that propounded in the little pamphlet issued by the Latin Professors in the University of Wales, or that set forth in the U.S Conference reporting to the Committee of Ten) are thoroughly satisfied that the revised is the better It is certainly demonstrably nearer the original, and it is far more musical than the singularly barbarous longs and shorts which English scholars have used for three centuries. The false quantities of the imperfectly instructed are not only excruciating to the more cultivated ear, but they also make it more difficult to acquire a sound appreciation of the melody and stateliness of verse or of the subtler music of prose. At first, quantities must be marked for the beginner, who should be encouraged also to note quantities for himself; and as soon as he learns to construe verse, he should be set to learn it by heart; and a little later, prose as well.

Sixthly, if we are able to choose for ourselves, we should begin with authors in whom young folk may be expected to take some real interest. To the boy or girl on the threshold of Latin, Caesar's Commentaries are indubitably dull and therefore unsuited and unsuitable; such easy prose as Eutropius or Cornelius Nepos or simple selected passages of graduated difficulty are far preferable. But better than any of these, to my mind, is the Latin Bible. The use of this for a year or more will not seriously affect the young learner's capacity to acquire a good style when he begins later to read prose of the Augustan age, and it will confer the absolutely inestimable advantage of facility. After the all-important start, it matters less what authors are read. The traditions of English scholarship are so sound that there is an abundant supply of the noble classics, edited only too well. But it is matter for wonder that later Latin, singularly suitable as it often is for school use, is so little favoured. Such books as the younger Pliny's letters, for instance, are attractive, interesting, full of useful matter, and excellent models of style; but, of course, they are not "Augustan".[1]

Latin or Greek first?

It will be noticed that we take it for granted that we begin with Latin, and not Greek. This order has in its favour: first, prescription; secondly, the more general and obvious connexion of Latin with the business and traditions of European society; thirdly, the not inconsiderable fact that there is no new alphabet to learn. Except for this, it would be easy to agree with Pestalozzi and to lead off with the *Odyssey*, which is singularly suitable in scope and style for the young.

The construe

If there is any branch of teaching work in which the English schoolmaster should be perfect it is in the conduct of a construing lesson; and, in fact, the great English schoolmasters have probably been at their best in this truly fine exercise. For a construing lesson gives unequalled opportunity for the practice of all intellectual and many moral virtues; even Herbartian pedagogics cannot devise a better gymnastic for the powers of apperception. It is an incomparable training for thoroughness and the honest weighing of the force of every bit of evidence that can be brought to bear on the task of interpretation.

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[1] See Rabelais' *Pantagruel*, chap. viii.

To most of those who condemn the study of Latin and Greek, classical study means, we should find, merely the learning of so much translation and the understanding of as many "allusions" as the text may supply. To the scholar, it is, in point of bulk, an acquaintance with some, at least, of the great masterpieces of literature; in point of training, the capacity to interpret a strange tongue readily, honestly, and exactly; and in point of accomplishment, the command of an English style at once accurate and concise. That is, the construing lesson is a most convenient road to knowledge, to logic, and to literary style. Let us now see by what means we may make the construing lesson best serve the purposes which we desire.

Procedure

We have to remember, first of all, that the end which we are to keep before the class is the material end, not the disciplinary end. The class is to understand its author exactly. We will suppose that the work is "unprepared". The teacher takes the first paragraph, and reads it aloud to the class; the longer the passage you feel yourself free to take at one time the better. The purpose of this is to give the class the habit of regarding the Latin or Greek passage as a whole and not as an ingenious arrangement consisting, like a Chinese puzzle, of parts (*i.e.*, words) fitted together without organic relation. Read it therefore as you would speak it, once, twice. The next step is to find out whether any member of the class has caught the drift, and to encourage the contributions of various members of the class. The harder words may be translated at once by the teacher, but a word for word translation is not desirable except as a last expedient. An excellent plan with young pupils is to give them in English the substance or a *précis* of the passage before they are called upon to construe, so that they may not be discouraged by facing matter which is entirely unintelligible.

The next step is to get translation as much as possible by phrases, not single words, and in the Latin order of phrases. The effect of this is to make sure that the class understands the emphasis as the writer meant it to be understood. If the words offer no further difficulty, these phrases should be most accurately rendered into the nearest equivalent in English; but if there is still a word the meaning of which the teacher wishes the class to gather from the context farther on, a provisional rendering is, of course, permissible, the difficulty being noted as not yet resolved. But at no point should a sentence be dismissed until not only an accurate translation is made, but an "elegant" one also. In this way the Latin or Greek lesson becomes a most valuable adjunct to, if not substitute for, the lesson in Rhetoric; and it is to be remembered that the use of such a lesson is to cultivate not only the power to write and speak well, but also the power to appreciate good writing and speaking elsewhere.

Syntax

In the correction of errors is our best opportunity for teaching syntax. The skeleton of syntax, with younger pupils certainly, is more easily taught as the need presents itself for the interpretation of new passages. The rule as discovered by the pupil under the direction of the teacher is recorded by the pupil in his note-book and a space is left for other examples as they occur. After some progress has been made thus, it would be waste of time not to master the bulk of the syntax without waiting for examples to present themselves in the course of reading. When a mistake in translation indicates that the pupil construing has no proper knowledge of the rule broken, it is well not merely to correct the error, but to elicit or to show what would be the Latin (or Greek) equivalent of the rendering wrongly given.

The dictionary

As new words are met and mastered, the class should be encouraged to classify them and their cognates and derivatives in families, as often as possible in phrases. In this way, we drive the class to an intelligent use of the dictionary, and at the same time force it to conclude that translation by phrase is nearer correctness than translation by word, for the reason that exact synonyms in two languages are exceedingly rare.

This faithful use of the dictionary and other books of reference in preparing a lesson is a most valuable part of the classical training. The scholar is thus driven to get light on his task from all the quarters known to him to be likely to supply it, his teacher exacting from him some guarantee that he has used all reasonable means to ferret out information before giving him help in the actual construing before the class.

Texts and notes

A word here on the use of annotated texts. These are both a good and a bad sign of our times. They certainly show a great deal of exact and industrious scholarship, and are often models of interesting as well as learned editing. They are also, both to the teacher and the class, what bladders are to the swimmer; they ease effort, they save time and trouble, and they do much therefore to deprive the rigid study of the text of a great deal of its value as discipline. When a teacher or a pupil knows that his editor has done all the work, except the memorising, beforehand, has, in fact, predigested the intellectual food, he naturally reserves his own energies for other emergencies. References are quoted in full, not indicated, and so he is not even required to verify his references, which we used to be told was the essence of scholarship. Certainly, classically trained people now-a-days know less of the inside of a large number of books than in the days when classical knowledge was not arranged in a multitude of little assorted heaps. Physiologists say that the triumphs of cooking and chemical discovery will ultimately deprive us of our teeth and most of our bodily organs of digestion. Something of the sort is certainly happening *in dissimili materie*, our classical learning.

Unprepared translation

The remedy, so far as a remedy can be suggested, is the imposition of a great deal of unprepared translation, to be done *vivâ voce* in the class-room. Master and pupil here stand on the same ground with a bare text, and the function of the master is leadership of the party of discovery. He assists and suggests, but leaves the actual steps towards certitude to be taken by the pupil. The bold teacher, too, will at all times prefer the plain text, though this, perhaps, is a counsel of perfection.

The evil of predigestion

The serious evil of predigestion, as we may call it, is not peculiar to the secondary school; its work has indeed been less fatal here than in the primary school, but only because the ground to be covered is greater in the one than in the other. All contrivances seem to be used to the end that the learner shall have knowledge imparted to him with the least possible expenditure of his own efforts, and the general effect is an alarmingly low uniformity and loss of initiative. If we are not vigilant, the time will come when the scholars of a secondary school will be as incapable of using a book of reference as the children of primary schools. Instead of this, they will have tit-bits of information presented to them at odd times, and they will not necessarily know where they can go for more of such information when they want it. This will be dissipation with a vengeance.

Books of reference

The better known books of "Antiquities" and such admirable compilations as Dr. Gow's *Companion to Classical Studies* ought to be in the library of every young scholar, who should be driven to them on all possible occasions. The books used for reference or concurrent reading need not be mere dictionaries or records of antiquities. A most valuable lesson in the reality of the classics is to be learnt from the illustration of the classical book set for current study by the use of some great history or biography, Plutarch, Suetonius, Mommsen, or, it may be, Froude. In the reading of history especially, it seems to be desirable to bring together the original authorities and the later historians for purposes of comparison.

The repetition lesson has been much abused and much misunderstood, although (perhaps because) it is the oldest established of all forms of classical teaching. The recitation of Homer and Vergil were Greek and Roman exercises, as they are English exercises now; repetition (of prose, as well as verse) has been considered the Mother of Studies from ancient and medieval days to ours; and a good deal is to be said for it still. It may be admitted at once that in regard to the *matter* learnt by heart the gain may be greatly over-estimated, though we need not agree with Plato and Messrs. Bain and Spencer and other distinguished men, in thinking that any serious moral harm comes of the celebration of primitive destructive passions and ideals of life. But the learning of great masterpieces cultivates the taste by establishing in our pupil's minds, as familiar friends, the most famous and beautiful works of literary art; and if we think the powers of imitating noble speech worth having and the effort of imitation good as discipline, then the penalty exacted, the burden on the memory, is a small price to pay for a permanent benefit so valuable.

Incidentally, as we have seen in discussing recitation in English, the need for care in reciting a foreign tongue tends to greater precision in the use of our own ; and the English gentleman who has learnt to recite Vergil, or Horace, or Homer, however painfully, has had at least some training in the niceties of distinct speech.

Latin Prose

We have seen reason for thinking that the practice of re-translation from the prose-rendering back again into the original Latin and Greek serves to give permanence to the effects of the original lesson. When the proper stage is reached, the formal composition in Latin Prose serves a still further end of the same kind. It serves at least to fix the syntax more firmly, and thereby makes all subsequent efforts of translation easier —more automatic, that is to say—for the effort to use the idiom to express a vernacular phrase makes it at least one degree more truly our own. It is also a proof and test of the scholar's power to " think in the terms of another century," of another people. The finest flower of scholarship is to realise most exactly and intimately the mode of thought of another time, to move as a gentleman among equals, to comport oneself aright amongst strangers.

To this end, it is well, after the first step has been taken and plenty of re-translation has been practised, to use such exercises as give the greatest scope for the knowledge and application of idioms contrasting with our own, and to follow the common practice of setting pieces of fine original prose to be got by heart.

Latin Verse Composition

Latin verse composition has been much attacked and sturdily defended, but the attack has come with the less force in that its most strenuous opponents have not been in a position to estimate its methods and merits at first hand. It may be at once admitted that where a marked inability to make verses is shown, it is waste of time to exact a large tale of them ; and there should be some alternative exercise—in mathematics or history or logic—presenting reasonably equivalent difficulty to average boys.

Where on the other hand the reading of a pupil is wide enough and there is some facility, the writing of verse helps, as prose composition helps, to fix syntax and to cultivate atmosphere and imagination. Verse is an easier training than prose for the ear, and has, in its turn, a fine effect in quickening the general taste and the sense of propriety in style Moreover, the need for paraphrasing leads first of all to a carefully critical analysis of the passage to be rendered, and then drives the verse-maker to review a large number of words and phrases before he decides on his final choice. It serves, indeed, to give finish and fixity to the classical reading, as riders on Euclid do to Euclid's Geometry.

For reference .—Lyttelton in *Teaching and Organisation* and the same writer's pamphlet on the teaching of Latin verse Composition. Cookson in *Essays on Secondary Education* (Clarendon Press). Laurie's *Lectures on Linguistic Method* *Report to the* (U.S.) *Committee of Ten* (Washington, 1893) Messrs Paton and W. Rhys Roberts in *Aims and Practice of Teaching*.

CHAPTER IX.

MATHEMATICS AND PHYSICAL SCIENCE

All candidates for admission to this academy must pass a preliminary examination in Geometry.—Plato.

It is of course hardly possible to exaggerate the importance of the studies usually associated under these heads. They are quite indispensable, not only as gymnastics but also for their definite and applied results.

The sciences are generally marshalled under two main heads: the exact or mathematical, based mainly on deductive reasoning, and the experimental sciences, the physical and natural sciences, which use chiefly the method of induction. Under the head of exact or mathematical sciences, we include arithmetic, algebra, geometry, and the like; under experimental sciences come physics, chemistry, together with the sciences of observation, such as geology and botany, in whatever degree they lend themselves to experiment. Any science in which we can vary conditions so as to produce varying results and so establish laws or discoveries on logical grounds is an experimental science.

The value of the "exact" sciences

The especial value of the first class for educational purposes lies in its very unlikeness to the second. There is no doubt about the starting points; the axioms are self-evident, and all that we have to do is to raise a consistent superstructurr on them; or rather, to use the appropriate metaphoe, we are to draw from them a whole series, an infinite series, of irrefragable results. That is, from a few great principles (however derived), we elaborate our knowledge of the relations of number and magnitude. Thus we are trained in exact reasoning, for at no stage is there any doubt whatsoever about the premisses from which we start or about the meaning of the terms that we employ. Obviously, if we could conduct all reasoning on such lines, human errors would be few indeed. In so far as every stage is clear and can be clearly tested, the reasoning of mathematics is a type of perfect reasoning.

The strength of mathematics is derived from the very fact that its truths are detachable by abstraction from the concretes in which they exist for our senses. We argue *in vacuo,* so to speak, without any possibility of error arising from the accidents of individual inexperience, prejudice, opinion, or the imperfection of our senses. That two and two make four, that things which are equal to the same thing are equal to one another, are always true; and from these and a few similar facts we can derive other facts to infinity, so to speak, without appealing perpetually to concrete presentations. It is true that we teach, if we are wise, by means of concrete examples from the first but we very soon show that what is true (say) of two and two in the case of apples is true also of two and two in the case of nuts, without asking, as Mr. Oldmixon asks in the *Dunciad*,

> "Ah! why, ye Gods, should two and two make four?"

Putting aside both nuts and apples, two and two make four; and this is the first systematic lesson in abstraction. Arithmetic deals with those operations which lend themselves earliest in life to abstract treatment. Our earliest experiences of diversity suggest, for instance, duality and the like long before they suggest any other genera or collective notion; plurality, that is, comes in order of abstraction before other conditions. Arithmetic or computation, therefore, comes earliest in the mathematical training of the child; and its business is to examine the manner in which numbers are formed and how they combine.

Arithmetic should begin with concretes

The older fashion of teaching this subject, as we well know, was from the first to set forth the "rules" and "tables," to make pupils learn them by heart, and then to propound exercises and examples, severally unconnected with each other and of the smallest possible real interest to the learner. This of course strikes at the heart of what we have come to regard as good teaching, the natural stimulus of interest. A "rule" is not an axiom; and to set it forth baldly and without the preliminary of previous effort to formulate it, is, we must admit, not only to deprive the pupil of a valuable lesson in inferential reasoning, but also, by asking him to recite and believe a formula which does not easily carry conviction, to paralyse his reason at the outset, and to make his work mechanical and less interesting than it should be.

This means that the learner ought, particularly at first, to play the part of explorer and discoverer. It is therefore indispensable that teaching should, for a time at least, be as objective as possible, and especially in the earlier stages. If it is not so, our pupils are certain to regard the manipulation of numbers as a kind of magic, for which no reason in the nature of things can be assigned.

The teacher as pioneer

In this study, more than in any other, it seems desirable that the text book should serve very strictly to supplement the teacher, not to supplant him. And even if explanations and methods were always left to the teacher entirely, one could hardly regret this substitute for some existing amorphous works on arithmetic. Learners should be shown a process, and with the help of the teacher should formulate the reasons, and then, but not till then, state a rule. To take the easiest of examples:—it is better to show by the manipulation of objects that 2 × 3 is the same as 3 × 2 than it is to state the fact, and demand the assent of the learner to what is by no means a self-evident truth. When on our altering the position of the same objects, the pupil can *see* that there are no more and no less than before, he is forced to apprehend the commutative law even without our impertinent intervention.

For these reasons, the reformers of our arithmetic teaching urge that the relations of magnitudes should *as far as possible* be at first presented in concrete form. Numbers are necessarily pure symbols, but lines, for instance, are not. If the pupils see lines, join them, divide them, combine them, and so on, they soon learn what is meant by the process of multiplication and division of fractions, and can learn thence to formulate the law or rule by themselves. What they have seen with their eyes in the case of lines or other concrete magnitudes, they can generalise or abstract in the form of numbers. Thus, in teaching the weights and measures of the metric or any other "system," the measures and weights should, of course, first be seen and touched and handled by the pupil. The comparison and contrast of "systems" would seem to demand this imperatively. Actual work in measuring and weighing should be done by the pupils themselves; their proceedings otherwise lack reality.

It is part of the same plan to associate the operations of arithmetic as much as possible with matters in which the learners are interested by reason of familiarity or contiguity. Thus the discreet teacher of the primary school knows that his pupils are sent to shops by their parents, and he sets his youngest pupils such problems as they are called upon to perform from day to day at home. In the teaching of mensuration, the first examples are provided by the schoolroom and the school playground.

An American committee of expert teachers says: "The problem of computing the quantity of coal which would have to be burned in order to heat the air of a room from the freezing point to 70° would probably be beyond the powers of all our college graduates, except those who have made physics one of their specialities. Yet there is nothing in its elements above the powers of a boy of twelve. At this age the child could, by a few very simple experiments, gain the idea of a quantity of heat much more easily than the idea of stock in a corporation." Whether this view can be fairly maintained or not, it may suggest to us the desirability of abolishing the perversely obsolete subjects that still occasionally find their way into arithmetics. Most arithmetic of the strictly commercial kind might surely be left for the technical school; it forms no part, or a very inconsiderable part, of the elements of a liberal education. "Percentages," say the authorities just quoted, "should not be fanciful; insurance, discount, profit and loss, and the more advanced questions of interest, should be treated conformably with the comprehension of the class, if at all. The problems involved in some of these processes are all but beyond the young pupil's understanding."

Obsolete and technical arithmetic

At the point at which Arithmetic is the chief mathematical study of the pupil, such subjects as can be treated easily by algebraical methods would seem to be more properly relegated to that treatment; cube root and compound proportion are subjects of this kind.

Excessive preciseness in calculating results

The question of excessive preciseness is one that attracts increasing attention. There is a point at which minuteness ceases to be correctness, for correctness is strictly relative to the object which you have in view. In painting an effect which is to be seen from a long distance, an artist knows that it is waste of time to make his work over-elaborate. If I am asked my age, it is not necessary for me under ordinary circumstances to state it in term of years, months, weeks, days, hours, minutes, seconds. This precision is, indeed, pure mechanicalness; it serves no purpose; nothing is being produced, although the machinery still grinds away Its analogue in language study is excessive detail in "parsing," and it finds peculiar illustration in all branches of "scientific" (so-called) study. Professor Miall is a notable critic of this fault. He writes: "Looking the other day at a child's drawing of a dog, I found that the dog had only two legs, and no ears or tail. The little artist had made some progress with his outline, when it suddenly occurred to him that a dog is hairy and that hairs would be very easy to draw. Accordingly he began to draw hairs, and went on till his time or his energy was used up. That is very like a good deal which goes by the name of science."

It is this, indeed, as exemplified in the "science" teaching and, above all, in "science" examinations, which has often made the natural sciences bywords for wasted effort in school and college. It is far easier, of course, to record facts and work examples to an almost infinite exactitude than to keep first principles in mind and pass rapidly from step to step of wider knowledge. The exactitude frequently reached in calculations has nothing corresponding to it in our experience, and no use can be made of such results. Problems in this way cease to be real, and cease therefore to be useful. The answer, says Professor Hudson, though it must be right, is the least important part of a sum. For the teacher, the process is everything, and a pupil's method should show gradual improvement of the reasoning power. It is idle to expect him to use the "best" method of solving a problem from the first, and it is bad teaching to show it to him until he has done all he can in successive efforts to arrive at it by himself.

Ingenuity in process rather than accuracy in result

It is of the highest importance to get pupils to realise the value of their mathematics in ordinary affairs. From the concerns and details of the schoolroom, as we advance up the school, we can easily choose such problems or exercises as are within the scope of the pupils' interest either commercially, or in production, or as statistics illustrating some moot point, or as truly scientific computations pertinent to some school study So Professor Miall and Dr. Wormell would have us set, not long sums to be worked out mechanically, full of pitfalls and of no use to anybody, but rather easy sums which require thought.

All recent writers agree in urging that we should teach our pupils in performing simple multiplication to multiply first by the left-hand figure of the multiplier and to proceed in successive lines in the same way. The reasons set forth by Dr. Wormell show that this is imperative as soon as we consult other processes of arithmetic and algebra; and more particularly because it is the basis of methods of approximation, in which the pupil is positively forced to think of what he is doing, and cannot work mechanically. It is quite legitimate and even desirable to forecast roughly what a result is likely to be.

Dr. Stanley Hall holds that a good deal of arithmetic should be taught technically—that processes may often be shown first and examples given, the reason for the processes being left to "flash into" the mind at a later stage, when reason is more maturely developed. Without accepting all that this recommendation implies, it may perhaps be at once admitted that the strict and unvarying drill of young children during the practice of the four chief rules or processes in the decimal discrimination of adjacent figures (units, tens, hundreds, and so on), may be and often is carried to ridiculous excess. No doubt they should be frequently reminded that the figures have a decimal value according to their place, right or left; but if we require them invariably to give to figures their names in the decimal hierarchy, we place an unnecessary obstacle in the way of rapidity of work in calculation—just as the "complete sentence," used inordinately, produces clumsiness in general ratiocination.

The possibility of excessive rationalisation

We must not be in a hurry. We can easily disgust and confuse learners by making calls on capacities not yet developed. The Ingenious Cocker thought he had constructed an "Arithmetick suitable to the Meanest Capacity for a full Understanding of that Incomparable Art"; Professor Bain takes a view somewhat more modest than that of the earlier sage. "The full bearings of Arithmetic as a science," he says, "cannot be seen until the pupil has made some way in the higher branches of Mathematics; and they are never completely known, except to the few that attain the conception of the highest scientific or logical method. In the lower stage of school training, ease and accuracy in calculation, extended to the ordinary compass of arithmetical problems, must be chiefly looked to. The persistent practice of years should bring about this result; while rapidity is attained by special drill in Mental Arithmetic." Professor Matthews' authority is more recent, but even more weighty. "I am convinced," he says, "that less harm is done now-a-days by teaching by rote than those ill-advised attempts at rational instruction which are inspired by imperfect knowledge. Thus, for instance, if you state the binomial theorem for a fractional exponent, and the conditions for its validity, you do not educate your pupil, but you give him a piece of information which he can learn to apply, and which may be practically useful to him; but if you go on to make him learn one of those unsatisfactory "proofs" of the theorem which still keep their place in some of the text-books, you are doing positive mischief and replacing harmless ignorance by a mere pretence of knowledge."

The concrete beginnings of Geometry

The study of Geometry begins properly in the Kindergarten, where from the manipulation of the prescribed "gifts" and the exercises in drawing and modelling the children acquire a knowledge of geometrical forms and figures and a sense of the reality of the subject matter which a more abstract beginning certainly lacks. It is not only possible, but it is also most desirable that we should not begin, as in the orthodox way, by a statement of something that we are going to prove. We should rather, as the highest authorities urge, let the class as a first step *see* the main facts of plane and solid geometry. Drawings should be made, models of cardboard and other materials should be manipulated and rearranged in such a way as to give the learners the opportunity of standing as discoverers in their own right.

This kind of interest can and indeed should be maintained all through the study. To quote Mr. Workman, when we are dealing with "that awkward youth who is always sulkily asking us the wherefore of these triangles, parallelograms, and circles, it is no use to tell him that they are whetstones for his wits. He is not aware that his wits need sharpening, nor would he greatly relish the prospect if he were. Indeed, he regards his discovery of the uselessness of Euclid as a proof of his already superior sharpness. So we may lawfully use lower motives with him. We may tell him that there is a science of trigonometry which is merely the Algebraical statement and expansion of Euclid I., 47. That it is this science which enables ships to sail in straight course, or St. Gothard Tunnels to be pierced so exactly that engineers from Switzerland and engineers from Italy meet within an inch or two, in the centre of the mountain, after five miles of independent burrowing from opposite sides." The same kind of appeal to living interest prescribes that we should encourage the young learner to prove the validity and usefulness of his mathematics by the co-operation of his own hand and eye. He cannot pierce tunnels or sail ships, but he can make plans from his own measurements and approximations; he can model simple geometrical solids in cardboard or in clay.

The usefulness of geometry must be brought home to the pupil

Here as everywhere else we must encourage the pupil to make his own definitions. It is a great mistake to treat the definitions which we find in the books as matter for memory or even for unconditional assent. Passing over the elemental and fundamental difficulties in getting empirical definitions of point, line, plane, and so on, it is still easy to get our pupils to define for themselves most of the figures that form the basis of geometrical reasoning. This, indeed,

The making of definitions

constitutes the earliest step in teaching the pupil how to form unexceptionable definitions, and is a most valuable service to his intellectual development. The principle of economy is, of course, of the highest importance in definition, and it is easier to secure this in plane geometrical definition than in any other, the limitation to two dimensions, length and breadth, excluding irrelevant details, as it were, automatically.

Neatness of work

There may be some inclination to accept work from pupils which is slovenly in form, on their producing proof or even mere indications that they understand the point under discussion. But it should be remembered that geometrical reasoning, in particular, offers especial opportunity for cultivating the precision, exactitude, and conciseness which are of such vast importance in all logical method and statement. Mere written work, however careful, is not enough; it should be largely supplemented by very cautious and exact oral work. This use of demonstrative geometry is the best beginning possible of the study of formal or symbolical logic.

The need for "riders"

Above all things, it seems to be true that the knowledge of the prescribed author, be it Euclid or any other geometer, is of little consequence unless the principles involved can be applied to the solution of derivative problems or riders. Practised teachers say that the first step towards cultivating power to this end is to treat the Euclidian proposition (if we are working with Euclid) from our own point of view, to try to worry it out before having recourse to the book solution, and to provide by all possible devices that the knowledge of the class shall not be limited to the figure and letters as they are found in the printed text. The great purpose to be attained is to free the inferior student "from slavish dependence on his text-book while the able student 'may' gain power enough to make his own geometry". The practice of geometrical drawing is of course of great service here and elsewhere.

Can we substitute a better text book for Euclid?

Amongst matters of importance is the question whether we are to use Euclid's Elements or some one else's. Opinions differ. Professor Miall looks to see Euclid disappear altogether from the school. Dr. Wormell and Mr. Workman, both of them recent writers and teachers of eminence, would have us retain a text book which is, I believe, used for the teaching of Geometry by England alone The chief reasons for abandoning Euclid may be compressed under two heads :—

(1) Geometry itself has made progress, in its development and applications, and in nomenclature. There is no reason, it is said, except prescription, why the term "angle" should not be extended to include two right angles and even an angle greater than two right angles.

(2) Euclid's order is not the order of increasing difficulty, and therefore is not the "psychological" order which is said to be the best for teaching.

On the other hand, it is urged that

(1) We should take some account of the claims of sacred tradition, which has placed Euclid in such a commanding position in England, and

(2) The exigencies of examinations and the need for uniformity as a guide to the preparation of work and setting of papers are overwhelming.

Algebra should come early

The case for the early introduction of Algebra into the curriculum seems to be a very strong one, although there are authorities of considerable weight on the other side. But it would seem preferable to treat early training in Mathematics as the beginning of Algebra as well as of Geometry, for formal Geometry in the school is surely merely the continuation of the established Kindergarten teaching, with its distinctly geometrical basis; and Arithmetic very soon resolves itself into Algebra. On the other hand, it is certainly easier to demonstrate geometrical truth from the first by actual objects which the class can see and handle and manipulate for itself, and we may therefore reasonably expect that a class should be able to use the abstract language of geometry somewhat earlier than it could profitably employ the symbolism of algebra, the signs of operation, brackets, positive integral indices, etc. This however should not prevent us from preparing a class of young children for the symbolical method by the occasional translation of numbers and quantities into letters. It should not be hard to familiarise them with the notion that a nuts $+ b$ nuts $= a + b$ nuts. Negative numbers, as presenting special difficulties, would be postponed to a later stage. But there seems to be no reason for postponing the solution of simple equations and the like. Problems should, of course, be exceedingly easy, and every step made exceedingly clear But this great advantage will be gained – that the pupil will be called upon to use his wits, and the arithmetic will become less mechanical than it must otherwise be.

Mathematics, in its various branches, is one study

It must be repeated here that there are no strictly delimited provinces in the Kingdom of Knowledge; it is not possible to separate the whole of arithmetic from the whole of algebra. And more: it is possible, and it may indeed often be desirable, to pass from the elementary parts of the one straight to the other. A certain accurate knowledge of arithmetic is presupposed before algebra is attempted, but as soon as a boy can understand symbols, he may, nay he should, according to teachers of greatest weight, be straightway introduced into problems involving simple equations.

Again, algebra being in truth inseparable from arithmetic, being in fact "higher" arithmetic, a teacher who aspires to teach arithmetic should be well acquainted with algebra, just as only a teacher with a good knowledge of at least general European history can teach English history profitably. And it is equally necessary for students to know that the ordinary algebra is only one of several kinds of algebra.

Moreover, advanced parts of the text-book divisions have their easier portions which it is possible and desirable to taste before attacking the whole course of dishes. We need not, says one who knows, read the whole of a chapter before passing on to the next, though of course our pupil must depend on expert direction to save him from "o'erleaping his selle".

Even in algebra "doing" may precede "knowing"

Professor Matthews notes two points that need special care. It must always be clear that x denotes a number and not a concrete quantity; and the symbol = means not "is," but "is equal to". The same writer urges, most reasonably, that "just as practical geometry may fitly precede the systematic study of the science; just as experimental demonstration of physical laws helps to the comprehension of abstract dynamics; so the practical application of the laws of algebra, before their logical necessity is fully realised, is not only harmless but even helpful towards the complete understanding of the very abstract considerations upon which their general validity is based. The proper course would therefore seem to be to exercise the student as soon as possible in the practice of the fundamental rules by applying them to rational integral functions of a single variable: the process (*without the theory*) of finding the highest common factor of two polynomials is particularly valuable for this purpose." This lends weight to Dr. Stanley Hall's view quoted above; the reasons for the processes will "flash" on the learner when the mechanism of the process has become familiar.

The conference that reported to the American Committee of Ten speaks in the same sense. Certain algebraical propositions are to be presented to the learner before he can well be expected to understand their demonstration, as in the case of the rule of signs in multiplication and the binomial formula. The plan here should be to convince the learner of the propositions by *illustrating* them, and to leave the strict demonstration to a later stage. "That *minus* multiplied by *minus* is *plus* is proved by never leading us to a wrong conclusion," says Bain.

It is usually laid down that algebra as a special study can be safely begun in the thirteenth or fourteenth year; and it is certainly true that it is better to do a little well than to spend time "in solving catchy problems and summing fantastic series". Accuracy in process is more important than facility and rapidity, for accuracy is attention, is conscious, and is much more than mechanical. The chief purpose of the inclusion of algebra in the school course is that it helps to teach the pupil to reason, to use his wits.

The common ground of Algebra and Geometry

There seems to be no doubt that very great advantage is gained in the school teaching of mathematics by the practice of introducing the pupil at the earliest stage possible to the points where algebra and geometry join hands, and where mathematics enters into physical science. We all know that the investigation of mechanical or other physical phenomena becomes more interesting and the more fruitful in proportion to the power of exact calculation and prediction. It is this quality which gives to mathematics its high place as a study of practical importance in the business of life, quite apart from its value as a gymnastic. The wise teacher accordingly endeavours to connect mathematics, in special applications, with the natural science studies of his form; never, of course, venturing on the more abstruse questions, and taking care that pupils do not delude themselves into thinking they understand what is still dark to them. We must not, on the other hand, be in such a hurry as to forgo in school teaching the preliminary and constant use of practical experiment and the investigation of concrete phenomena merely because we can get the same results in a more generalised fashion, by the deductive or mathematical process. The penalty paid for this error is that the learner is less thoroughly interested and less thoroughly convinced; for the demonstration is intellectual only, and lacks the reality that is, we know, associated in young and adolescent minds with concrete phenomena alone. "We approach the subject first by the comparatively clumsy experimental method in order that the boy may acquire the quasi-instinctive mechanical bias which comes of grappling with concrete problems," as Professor Miall says.

Are the "sciences" to be taught severally in any particular order?

Out of this subject rises another which has caused considerable discussion, often, I think, the result of some misunderstanding. Are we to teach the "sciences" in any particular order? And, in particular, is the teaching of Physics to precede the teaching of Chemistry? If we remind ourselves of what has just been said in regard to the need for making our mathematics as real as possible, we ought to be led back to the principle which we have already established, to the effect that in the school stage of education we must think primarily of *connectedness* in curriculum. The study of the specialised sciences should be postponed as long as possible, in order that the closest connexion may be maintained between the matters studied. Now there is really no question in dispute as to the primary claim of the simplest zoology and botany to a place in a child's education. The animals and plants about us are so intimate and near, make such comparatively slight calls on the powers of abstraction and lengthened reasoning, that their early claims are generally conceded. But, at a later stage, the question between chemistry and physics has been very earnestly contested.

The claims of Chemistry and Physics respectively to precedence

In England it is almost true to say that "all the speakers are Whigs and all the voters are Tory". Whereas our school science has for a long time been primarily and often exclusively chemistry, the experts have mostly claimed the earlier place for physics. In America, on the other hand, the body of expert teachers of greatest weight has pronounced almost unanimously in favour of chemistry as the best of the sciences for early school use.

Now *logically* physics would naturally precede chemistry; chemists and physicists have inclined to believe that chemical action, the behaviour of molecules and atoms, is, at bottom, a series of special cases of mechanical laws. Some investigators have gone so far as to say that even nervous changes and adaptations are probably of this character. That is, there is at least reason to suppose that the laws of mechanics or physics are more general, cover a wider ground, than the laws of chemistry. But this does not prove that such laws are apprehended by the learner in that order; the psychological is not necessarily the analytical order. Indeed, the presumption is the very contrary.

However in favour of the precedence of physics is the fact that a great part of the subject understood by this term deals with phenomena that can be seen and felt; they are distinctly concrete, whereas in chemical action the greater part of our knowledge is the result of inference. For instance, chemical "affinity" is much harder to understand than mechanical "cohesion" or "adhesion" We *infer* the affinity; we *see* the cohesion. "To make the study of chemical theory as little artificial and as much rational as possible, and to secure intelligent conception of its many and close relations to physical laws, a previous training in the conceptions and measurements of such fundamental quantities as mass, density, specific gravity, heat, specific heat, and others, would seem practically indispensable. . . . In fact it seems not unreasonable to suggest that the whole subject of elementary physics forms a desirable basis for the study of the elements of chemistry." So urges Professor Waggoner.

It seems probable that English teachers are likely to adopt the view held by Professor Waggoner, and prefer, as a starting-point for experimental science, the study of elementary physics, beginning with mechanics, to any form of chemistry however elementary. It can hardly be doubted that the daily life of young scholars, the things they see and handle and talk about, supply copious material for observation, experiment, and reasoning. They notice weight, mass, movement, and the like, before other phenomena. Chemistry comes next, if treated very strictly in an experimental way, with a minimum of lecturing and a maximum of manipulatory work on the part of the class. The elements of physiology or botany may or may not be included, according to the length of the curriculum; but with the elements of physics and mechanics the strictly school course should be considered sufficient. I cannot say that either physiology or botany seems to me a good school subject. However skilful the use which a clever teacher may make of botany in getting a class to see the adaptation of structure to environment, the study makes an inordinate demand on the mere memorising powers; and animal physiology is on many grounds offensive and unattractive to young people. Botany, however, has the enormous advantage of sending inquirers out into the fields and under the trees with their eyes open. Physiography is a necessary preliminary to geography and is dealt with under that head; and geology is too specialised a study to be suitable for work in school.

It should not be impossible to include in a school course for pupils up to the age of sixteen or seventeen a general training in science and scientific method, including the things of most importance in physics and chemistry, and of course physiography as a foundation for geography. After this stage the studies may become more special, but there seems to be good ground for preferring physics to chemistry.

"Science" as discipline

It is generally agreed that the inclusion of science in the school curriculum is essential. Much harm has been done by reaction from the violently excessive prejudice in favour of the physical and experimental sciences set up by Mr. Herbert Spencer nearly forty years ago. According to him, "science" is the sum total of knowledge. The fine arts themselves, he says, are based on "science"; "science" is poetry, "science" affords the best moral discipline, "science" is the great stimulus to religion itself. "Accomplishments, the fine arts, *belles lettres*, and all those things which, *as we say*, constitute the efflorescence of civilisation, should be wholly subordinate to that instruction and discipline in which civilisation rests. *As they occupy the leisure part of life, so they should occupy the leisure part of education.*"

To establish against Mr. Spencer the paramount place of *belles lettres* in a liberal education, would be to discuss again much of what has been already said in this book about literature generally. It must suffice here to say that literature is not meant to occupy the leisure part of life, but rather to pervade the whole of it; it *is* life in certain most important aspects. And we admit no leisure part in education. A study is profitable in making character, or it is not. If it is not, we have no concern with it. But in spite of unconscionable exaggeration, Mr. Spencer's claim on behalf of science in education is the *locus classicus* in which its moralising power is celebrated.

A knowledge of items does not confer creative power nor explain works of art

Although the fine arts are not "based upon science," yet knowledge of detail and the eye for it, combined with the inspiration and enthusiasm that are unanalysable, undoubtedly make the completer artist. We may, however, push our knowledge of detail ever so far, we may master all the systems of rhetoric and know the uses of all figures of speech and schemes of prosody; there still remains something in the finest work of art which defies all analysis, which, indeed, testifies to its spiritual originality and independence. We may be able to say in what modes creative genius expresses itself, by what channels or instruments; but we do not know what makes the result so wonderful. An artist, a painter or poet, may be inaccurate in pictorial or descriptive detail and yet profoundly effective; as Shakespeare is in spite of his disregard of "the unities," or what a niggling criticism would call "accuracy". "Scientific" accuracy may even be impertinent.

Still it remains true that the more we understand of the order of the universe, and the connected details of phenomena, the better able we should be to see their beauty. Patient and minute observation, intimate knowledge, combined with a reverent temperament, undoubtedly confer this gift of appreciation, as they did in the case of Sir Isaac Newton, in the case of Huxley, and as they may do in the case of Mr. Spencer himself. But without reverence and humility, it may become mere arrogance. For it is just what we do *not* understand, the part of our experience that evades analysis, it is this which is the source of aesthetic pleasure. No doubt the rounded rock marked with parallel scratches may call up less poetry in an ignorant mind than in the mind of a geologist, who knows that over this rock a glacier slid a million years ago. But the poetry is in part the result of the geologist's not knowing exactly what set the glacier in motion and who ordered the million years. If nothing were left to wonder at, there would be no poetry and no religion. Science should therefore cultivate reverence and humility, if it is really science.

As a mental discipline, again, the claims of science are very high. Accuracy in observation requires that we should eliminate from our consciousness all the points that do not matter, in order to note those that do; this is the way in which we cultivate attention, the first thing necessary for successful mental effort of the simplest kind. Most of us go through our daily life with very little continuous

Science both feeds and exercises the mind

concentration on phenomena; there is, indeed, little need for us to be habitually "attending" to the things about us. It is even better to let our minds be reasonably "vacant" than to be in a state of perpetual effort. But just as in morals it is salutary, and even essential, that we should have frequent opportunities for the exercise of self-denial (such as domestic life provides for most of us), so in order to keep the intellectual powers fresh, we ought to have frequent calls for the concentration of our attention. The observation of experiments, the vigilant detection of results and their accurate measurement, are just what experimental science provides.

"Science" trains the mind best by referring consciously to the laws of logic

Most of our practical intellectual errors arise from the haziness of our ideas; for instance, we confuse one class of things with another class, we define one term in such a way as to include other terms not in question. Several people may mean several different things when they speak of gas, or of the British Constitution, or of a republic; when a child says that a noun is something that tells you what a person or object does or suffers, his definition may cover a book, a verb, a phonograph, and many other things.

It is often matter for wonder that teachers do not spend more time in the direct cultivation of the power of classification and definition. Botany, for instance, is a common subject of school study, though by no means, as used, one of the best forms of "science"; and pupils are taught to classify plants according to certain characteristics. Here is the opportunity of the good teacher to show the class the logic of classification and the meaning of a good definition; what precautions must be taken to distinguish species from species, and species from genus; and how to make a definition which is clear and sufficient—distinguishing the thing defined from all other things, and just enough and no more for its exact identification. We might well begin by pointing out how the rules of logical classification and of definition hold in geometry, and get pupils to apply the same principles to classification and definition in (say) their botany and their grammar. A vast advance is made in profitable teaching if the pupil is induced to recognise the validity of the same logical laws of classification, definition, proof, and so forth, as well as the need for logical precision, in every subject of investigation. In every-day affairs, the knowledge on which we act is gained mainly by induction, and we ought to teach our pupils how to use inductive methods most surely. We arrive at generalisations by a careful examination of individual facts, and we should provide our pupils with some standard for judging on what grounds they are entitled to make inferences, and what pitfalls lie in the way. Yet teachers perpetually encourage children to make a general inference from one unanalysed particular, a most pernicious practice. We are all liable to error from hasty generalisation, and young people necessarily more than others, whereas real knowledge can be measured by the number of general truths which we have arrived at for good and sufficient reasons. If, then, the teacher of science—physical or philological—will be at pains to show how each step which he takes is secure *on grounds of logic*, he teaches his class a lesson that is priceless because it is applicable over the whole range of practical activity.

For reference:—Dr. Wormell and Prof. Miall in *Teaching and Organisation*. Prof. Matthews in *The Aims and Practice of Teaching* and the *Educational World*, Jan. 1899. Prof. Miall in *Journal of Education*, 1895, p. 406. *Report to* (U.S.) *Committee of Ten.* Bain's *Education as a Science.* Harris in *Report of the* (U.S.) *Committee of Fifteen.* Stroud in *Journal of Education*, 1897, p. 44. Welton's *Logic.* Adamson's *Logic for Teachers.* Welton's *Logical Bases of Education.*

CHAPTER X

GEOGRAPHY AND HISTORY

> *I am not here to teach you history. No man can do that. I am here to teach you how to teach yourselves history. I will give you the scaffolding as well as I can. You must build the house.*
>
> —CHARLES KINGSLEY.

Geography and History in Education

NOTHING has been proved more conclusively by scientific investigation than that man, whatever his origin, has been made what he is, to an extent beyond our computation, by the action of physical forces playing upon him from time immemorial. If, then, it is essential in education that we should know the world we live in and our relation to it, we must obviously attach the highest importance to the two great series of studies that tell us, first, the nature and operation of the forces that have made the earth's surface—that is, the home of man—what it is; and secondly, how these great physical forces in combination with spiritual forces have affected men collected together in societies. The first is the substance of what we call Geography; the second, of History. Geography helps us to a knowledge of what man's home or environment is and how it comes to be what it is; History helps us to a knowledge of what he has done and is likely to do in it, and why.

If men were the result solely of physical forces, geography might well be taken as an all-embracing and sufficient study. In that case, from a knowledge of those facts which Professor Huxley comprehended under the name of Physiography, we should be able to explain all that man has done, is doing, and is likely to do. But man has all sorts of instincts and tendencies that are unanalysable as the results of mere physical environment, and yet are clearly inseparable from his nature; so physiography must hand on the task to political geography, and political geography requires the help of history to explain the spiritual and intellectual influences at work on man. Geography is thus on the one side connected with the natural sciences, and on the other with the "humanities"; and if properly studied, must concern itself with both. There is a kind of succession; physiography investigates the great forces affecting the whole world; physical geography investigates the results of these forces as they are expressed in the distribution of land and water; political geography throws light upon the action of these geographical results in human societies, and *vice versâ.* Thus, again, geography is not merely physiography, because its scope of inquiry is different; it deals not with the general questions of the action of great forces, but it introduces the limitations of locality. It asks as physical geography what local physical effect a particular physiographical fact produces in a given place; and as political geography, it asks how this physiographical fact affects the political and social relations of men in that given place, and how men in their turn modify the conditions and fortunes of their local surroundings.

Geography and its connexions in the sciences

But it can hardly be doubted that a real or philosophical comprehension of political geography and of history requires considerable knowledge of general geography; and that a knowledge of general geography is necessarily based on a knowledge of physiography. It is possible, however, to treat physiography, when we are dealing with the later stage of school-life, that beginning at fifteen, as the business of "science" teaching. We must suppose that the school curriculum recognises somewhere that a well-instructed and well-prepared youth should know something of the configuration of the earth's surface, of meteorology and climate, and of the things found in and on the earth—minerals, animals, and the like, the one set of phenomena being determined by the other next above it—in this case, physiography.

In later stages, geography is "science"

But the Geography lesson proper asks what is the meaning of all these things to man, how this particular "environment" affects him and his affairs. The geography lesson as distinguished from the lesson in physiography must therefore deal somewhat cursorily with subjects which are the main matter of physiography. For instance, physiography has little immediate concern with the density of population in various centres of the earth; but the geography lesson makes a point of emphasising this. Density of population is determined in very many cases by copious rainfall; but geography is content to note this fact of copious rainfall, the full reasons for which are given by physiography, and to use it, together with other facts non-physiographical, to explain, as a secondary result, density of population, and, as tertiary or derivative results, those divisions of the earth's surface which we call political. Thus we see that though political distribution may depend remotely, though in a direct line, on physiographical causes, the lesson in geography cannot do more than briefly accept the information supplied by

Geography, the meaning to Man

physiography. Thus, again, the teacher's task is to choose not how much but how little he is to teach, though he must teach in such a way as to give his pupils the power of knowing what facts are significant, and the power of "going on".

If we are dealing with pupils who are not yet of an age to apply themselves to intensive and detailed study of physiography as such, physical geography as such, or political geography as such, we must, of course, teach the elements of the one with the elements of the others, in order to make each interesting; but we must bear in mind that the natural divisions and features of the surface of the earth are the result of physiographical fact, and the administrative divisions are results of natural divisions, more remotely in the series.

In any case it should be clear to us that, to be effectual or sufficient, our knowledge of home surroundings can be ultimately built solidly and philosophically only on the larger or more general basis supplied by a knowledge of great natural forces and their action in other places beyond our sensible experience. We must teach *some* physiography, and *some* general geography before we can hope that our teaching of home geography is as serviceable, and even as intelligible, as it may be. We teach it roughly at first, by observation, such as it is, we can get our pupils to interpret these observations aright ultimately by the more general studies.

Geography as a core of instruction

The point of chief importance to notice here is that geography is, all through, an inquiry into causes and effects, and therefore, as a subject of study, has the supreme merit of being well concatenated, related in its parts, capable of being made into a rational whole. This constitutes its great value as a centre or core of instruction, if it is properly taught.

If taught unscientifically, it is of little consequence; we might as well set our pupils to "get up" a gazetteer. If geography is not treated as a study of causal relations, it is merely topography; and topography is the main part of the old-fashioned geography, which burdened the memory with a great number of details which, on any rational principle, were unconnected.

The general element in Geography

It should be clear to us, then, that our geography, to be really profitable, must contain a general element; and this in two main ways. We can easily see how close is the bearing of the facts of physiography on geography, that is, how the action of the great master forces must be understood before we can explain their local effects. But more; we must also step out beyond the borders of our own political limits so as to get means and material for comparison and contrast. We must know other lands as well as England before we can understand England. "What should they know of England who only England know?" To confine English learners to a study of the "geography of Great Britain" might result in a minute knowledge of the topography of their own country, but it would not be geography, although this kind of limitation is much less perilous in the case of Geography than of its sister study History.

It would seem desirable therefore, first, to base geographical study on a study of physiography and then to direct the pupil's attention at as early a stage as possible to countries outside his own, so that he may recognise the features common to all. Here another question emerges. How are we to begin? Are we to postpone all knowledge of detail until the basis is well and truly laid in physiography? Or can we profitably teach the elements of physiography and of geography, physical and political, side by side? The answer that will be given by the practical teacher probably admits of no doubt. We must begin with what the young learner can see and verify; we must interest him first of all in the things about him. A plan of the school or house, a map of the familiar neighbourhood, would seem to be an indispensable beginning to the most profitable course of geographical lessons,—invaluable if we can get a child to make them, however imperfectly, for himself. But it would be mere pedantry to try to work in this way continuously. We begin with our pupil, it is true, when he is quite young. As in Mathematics, we take measures from time to time to convince him that what he is learning as abstractions lie hidden in concretes. But we can soon quit our little beginnings, our schoolroom, or house, or neighbourhood; and when once the step has been taken, it is the privilege of civilised beings for whom maps are made to be able to travel by mental effort a thousand miles away, if need be, from their own doors. The chief business of this early introduction to topographical geography should be to teach the class to understand the language of maps and other graphic records of geographical facts; to read them as an accomplished musician reads a score. Under very favourable circumstances, when we have hills and rivers within the compass of a walk, we may go farther and get children to realise their maps more truly, but our chief purpose in this first stage must be to enable our pupils to interpret the mapped records of position, distance, area, and so forth. Moreover, in these days of model-making and pictures, it would be mere wastefulness not to use them for the purpose of giving our children some working notions of the commonest physical features of the earth

The "concrete" method must not be used unduly

—rivers, mountains, plains, valleys, islands, and so on, those first which are next to the child's experience, and therefore psychologically fitted for early presentation. Here the abstract must be used to correct the concrete. Pupils brought up on coarse and monstrously ill-proportioned models may get seriously erroneous views as to geographical or physiographical facts.

Meteorology and climate

Side by side with this somewhat topographical study, we may well introduce the class to the more familiar phenomena of meteorology and climate —rain, clouds, snow, hail, wind, and sea; and later still, to the phenomena caused by the planetary character of the earth, its atmosphere and tides and currents; and finally the effect of climate and physical configuration on animals and vegetation.

It is obvious that we shall soon have to supplement the map by a "globe," as soon, indeed, as it becomes necessary to get our pupil to take account of the fact that the earth is round; we cannot otherwise explain the phenomena of day and night, latitude and longitude, tides and currents, and the like.

There seems to be no reason why we should not accustom boys and girls to know a good many of the more obvious topographical details about places whose names are familiar to them. Learning useless lists is one thing, but knowing the relative positions of places that are frequently mentioned is quite another. To this end it is desirable not indeed that lists should be committed to memory, but that our pupils should be encouraged to con the map, and to use it very freely, whenever a well-known place is mentioned in the course of any of their studies.

Hitherto we have been dealing with the material and methods which may be supposed to be fitted for the teaching of geography up to the fourteenth or fifteenth year, and it may be taken that the line thus indicated would cover a course complete in itself, so far as it went, for that period, and would also be a satisfactory preparation for a more detailed and intensive study in school-life prolonged farther. We must recognise in every subject, but particularly in subjects like history and geography, where breadth and generality of conception depend on widening experience of the world, that it is necessary to begin by teaching the more striking and interesting elements with strict reference to the capacity of youth to understand; and that we must be prepared to go over the same ground again, perhaps more than once, in a different way, in accordance with the growing expansion of a learner's horizon and power of conception. Thus we shall teach the facts concerning rivers and mountains differently to children of seven years and ten years and fifteen years of age. At each stage we shall begin, in a logical sense, farther back; with matter covering a larger area. You would say nothing to a little child about the shrinkage of the earth's crust, but a pupil of fifteen or sixteen would find little difficulty in conceiving such a fact, and could be easily got to recognise the confirmation of our teaching in accessible areas of observation. If we remember this, we shall not be puzzled by the apparent quarrel between those on the one hand who would have geography to be "a demonstrative" science, derived directly from the premisses supplied remotely by mechanics and then by physiography, and those, on the other hand, who declare that we ought to start from home and teach the learner to observe, in ever-widening circles, with his own eyes, and accept no "facts" which he has not himself acquired through his own observations.

Different ages require different procedure

History and histories

The same is true of History studies. The history of our own country, which is most sedulously taught in our schools, must be related to the general history of the world on the one hand and to the history of other countries on the other. It would otherwise fail to produce its most profitable effect as a branch of education, first the widening of the intellectual and moral horizon, and secondly the cultivation of the power of weighing evidence.

Comparison and contrast continually necessary

The chief essential in both History and Geography to prevent either from becoming a mere list of facts is constant comparison and contrast. The facts concatenated in history as causes and effects will still remain mere catalogues of things in succession unless they are generalised by being shown to be like other causes and other effects in similar succession. So, too, in geography. As a beginning of geographical study, we must needs secure a rough, mastery of our immediate surroundings, and the isolated position of England makes the step at once natural and convenient; but this done, we should proceed at once to a more extensive consideration of little points. We should compare the size and shape of England with that of all other countries in Europe; then the mountain systems of one marked physical section with that of another in the same continent; and then the river systems in like manner. To take political divisions as the order of successive teaching is a much less rational and a much less useful method of teaching, even as a means of memorising. If then (to make a practical suggestion), we have to teach a class of children the geography of the chief political divisions of Europe in a given time, we shall certainly gain by choosing the rational order rather than the order of arbitrary succession.

Commercial or Economic Geography

"Commercial" or "Economic" geography is not a kind of geography different from the sort which the school should teach, but rather a special application to particular problems of the general capacity trained in school. The geographical problems of commerce and economics may with great advantage be treated as an occasional part of the school exercise in geography, as "riders" so to speak. In school we give the same general training in mathematics to the man who is to be an accountant, an engineer, a surveyor, a gunner, or the like; but each subsequently devotes especial attention to the kind of problem likely to help him in the discharge of his professional duties. So in geography; we give the indispensable general training before we apply the capacity thus trained to special purposes.

"The root of all geographical ability," say Mr. Mackinder, "lies in being at home with maps." This does not imply a mere familiarity with multitudinous details, which constitute a mere burden to the memory, but rather a thorough acquaintance with the general physical and political features of the countries of the world, and the natural conditions obtaining in each section; statistical information about details is incidental, but the power of appreciating the significance of statistics and of acting upon them is vital. When once the general geography is mastered, the student of commercial geography may be directed to the special consideration of definite commercial problems. But above all things the general training should come before specialised study; Geography and Commerce before Commercial Geography.

Geography, we saw, helped us to a knowledge of the home of mankind, with its effect on men and their reciprocal effect on it. We cannot properly dissociate Geography from History, nor was it ever done until these later days of excessive sub-division of studies. No one reads the history of Greece and Rome without an atlas, but the inordinate "modernisation" of studies has divorced two studies that should never have been put asunder. History tells us what men do and have done in organised political societies, "grouped in governments". It views things in the aspect of time; as they go on; as processes. Plainly, history at its highest is a biography, a biography however, ultimately not of individuals, but of communities. And just as in geography we begin with familiar and striking details of home surroundings, so in history we introduce children to the biographies of individuals before we expect them to take any interest in communities.

History is of political societies

There are some misconceptions, it would appear, as to the effects produced by history study on the mind. Too much is expected of it. First of all, it is true here as elsewhere that a good teacher will do more work with a bad "method" than a bad teacher armed with brand-new and irrefragable psychological theories. In the next place the study of history would seem to serve for intellectual very much more than for moral progress. The study of history does not necessarily enlarge sympathies, nor prove the destructive results of unrighteousness, nor inculcate the duty of individuals to the state, though it may help to do all these things in the hands of a good teacher who works on material otherwise well prepared. The "application" of history lessons is their weakest point, for the reason that the lessons may be made at different times and in different hands to prove such various things. We may perhaps like people the better because we know

The effects of history study

more about them; but history does not show unrighteousness on a grand scale invariably followed by retribution; nor that the devotion of the individual to the state has always been justified by results in common happiness or prosperity or virtue. Moreover history is much more concerned in proving differences between nations than in showing that we are all men-and-brothers. The study of history does not necessarily make people impartial, if their sympathies or prejudices are naturally acute. Macaulay, Freeman, Froude, among ourselves; Treitschke and Mommsen among the Germans; these are not models of impartiality.

It is beyond doubt, however, that lessons on personages and incidents of history can be made to enlarge and purify the sympathies, to stir wholesome enthusiasm and patriotism and a sense of civic duty; but then these lessons are not really history, and it is positively essential that we should recognise the fact that most school "history," being necessarily picturesque and panoramic, must be merely preparatory for the real study of history proper, which may be begun in the later stages of secondary school-life, but as a special science is much more truly a study for adults. That is, history at school, in order to be successful as a subject of teaching, must not attempt too much, must not indeed try to deal with some important aspects of history unless in a very tentative way and with advanced pupils. The examination of authorities is a very difficult business if you have them merely at second-hand.

The weighing of evidence

The main work of scientific history is to weigh evidence, and the just estimation of the value of evidence is the highest flight of the critical intelligence. The picturesque and panoramic part of history is useful and necessary in the school in order to give atmosphere and perspective, to cultivate imagination, to enable young people to learn to realise times and places far removed from their own experience. The true significance of facts cannot be properly taught till comparatively late in the course of study, and history in the school must therefore not attempt too ambitious a task.

It is important to get this clear because in history perhaps more than in any other school study it has become the fashion to require both more and less than should be expected. For instance, constitutional history is entirely unsuited for school. It is largely a question of accumulated precedents, and calls for a far more precise knowledge of detail and judicial capacity than a young scholar can in reason be supposed to possess. But "foreign" history is indispensable.

Atmosphere and perspective

Let us examine the purposes which school history may be properly called upon to serve, and see if the ends we have in view help us to determine method of procedure. First of all, we want to give our pupils atmosphere and perspective. Intellectual and moral vulgarity arises from narrowness of vision, from failure to understand other people's point of view. To the vulgar person everything which cannot be stated in terms current and familiar is ridiculous, strange, and uncouth; the historical atmosphere, then, must help our pupils to realise, pictorially in the first instance, other ages and other lands. But then they want perspective also; they should be able to look on mankind down a long vista; to feel that the state of things with which they are themselves acquainted has its beginnings in a very distant past. We must therefore get them to realise the succession of events, and of states of society and of governments.

They must learn to see these things in their right proportions and in their proper places in successive stages of human development, for only thus will our pupils learn to respect other times and other manners. A vulgar and ignorant person may be expected to think little of Julius Caesar because the Roman of eighteen hundred years ago knew nothing of the steam engine or aniline dyes or dynamite; but when he begins to see the relation of this great man to his own times and to the subsequent development of western civilisation, the political perspective of a scholar becomes more correct, and his views wider and juster. The case here imagined may seem to be a very much exaggerated illustration of vulgar ignorance, but it is really only a special case of the general vulgar ignorance of the unlearned and unlettered who think this age and its achievements so incomparably greater than those of long ago. It is history that teaches us to distinguish between the real greatness that can be expressed in terms of spiritual and moral force and the greatness that is mere bulk. We want our pupil to understand the significance of the *process* which history examines; to discriminate the stages of evolution; to enclose in brackets, as a mathematician does, the quantities that can be treated collectively. The formal value of history as a mental gymnastic is its unifying power.

Ancient before modern history

It is a wholesome instinct then that makes us almost invariably teach ancient before modern history. Few of us have known successful history teaching of young children begin with the reign of Queen Victoria. We naturally begin with the ancient Britons and their woad, or with Arthur and his Round Table, or with King Alfred and the cakes which he did not neglect. These are more personal and therefore more picturesque than the multitude of blurred, confused, and kaleidoscopic events and movements that make up our more modern records. We naturally work down in succession, the task covering more and more details as we descend the centuries; but though we are brought down at last, even with young scholars, to our own times, we shall find remarkable confirmation of the propriety of the order of precedure, ancient to modern, in the fact that our children are positively more interested in the personages of the earlier parts of history than they are in those of the later. So we need not fear that we are wasting time when we teach ancient and medieval history in picturesque fashion at school rather than recent history of the constitutional variety. We are really preparing a very necessary background for the later learning high in the school or at the university, or for work later in life upon minuter details. Perhaps it is not truly history that we are teaching; but we are certainly creating the atmosphere absolutely essential if the subsequent teaching is to be of real value. To begin, then, with the earlier history is the more natural, because, first, the order of time is the natural order, and most early understood; because, secondly, the details are fewer; because, thirdly, they are more picturesque; because, fourthly, they are, as a consequence of all these considerations, better suited psychologically for the use of youth. Some people would have us begin to teach this and kindred subjects with a lesson on The Policeman. The significance of the policeman may well be taught; but surely it is mere pedantry to try to evoke in the minds of children the abstract ideas on which the ultimate justification of the policeman's presence depends. For the child, the policeman exists to punish wrongdoers; he is not an expression of highly organised social development.

Custom, then, and, it would appear, right reason, have settled that we should teach ancient history early in the school career and that we should even begin with it. But we ought not to confine this ancient history to the concerns of our own country. It is, again, atmosphere that we want. After a young pupil has obtained a general knowledge of the chief personages and events of English history, which can certainly be effected by the ninth year, two or three years can most profitably be devoted to the elements of world-history, concurrently, if you will, with English. He will have got much of the background already in the history which he has learnt as literature. He should have read the stately narrative of the Bible, the *Odyssey* and *Iliad*, many English ballads, and any sagas and lays of ancient days that may come in his way. These things should have been read or heard as stories, not, of course, as lessons with "meanings and allusions".

Ancient history should not be merely native

We must begin our teaching of history as social life began before society became highly organised. We must go far enough back to secure a *conspectus*, something which the pupil can comprehend "in the lump," to use a phrase sanctioned by Professor Withers. History, as a process, begins in a *plexus* which we cannot unravel, and so much the better is it as a start. It begins as narrative, and narrative, so far as we can tell, in song, and perhaps with dance, as the use of metre possibly indicates. It is, in fact, at the outset one and the same with literature. We should, then, use great narrative stories or poems, as early as we can; poems in prose, as Malory, if we cannot find ballads sufficiently simple, the *Arabian Nights*, early Greek stories, and so on. To quote again the distinguished authority just named, the point we must consider is not whether such stories

History of Social life

are historically true—that very matter becomes the subject of investigation to which the scholar will ultimately be directed—but whether they were once told as true. This it is which gives them their significance in the education of mankind, and marks them out as probably most acceptable to young learners. Our child reads English history from his seventh to his ninth year, inclusively, three times, each time in greater detail, once a year; for if we wait and worry over details, covering little ground at a time, we destroy interest and enjoyment, in history as in literature, by spoiling the pictures. At the end of his ninth year, he will have a pretty complete general knowledge of English history, as a panorama, a series of interesting events and personages. If we proceed at once to take the next analytical step, and try to get him to appreciate history as a study of evidence, we make a futile appeal to powers that hardly exist in a brain so immature. But we can most profitably proceed with the business of enriching the imagination and sympathy; preoccupying the ground, so to speak, which might otherwise become hereafter the seed-plot of ignorant provinciality and vulgarity. Think what a rich world this is for those people to whom it is the visible result of the teeming activities of a thousand interesting personages whose bones were dust and whose tools were rust centuries ago! And how poor to those who know it only as the little street in which they live and the persons about them from day to day!

First enrich the imagination by a general course

When, then, our pupil is ten, unless we are constrained, as alas! so many of us are, by examinations and other influences so often destructive of the main purposes of learning, a valuable year might well be spent in getting general knowledge of the great personages and peoples of the East, using the Bible where it is available; then in the eleventh and twelfth years, would come the outlines of the history of Greece and Rome; in the thirteenth and fourteenth the history of modern Europe; all, of course, treated very generally. A pupil who began his fifteenth year with the stock that this course—a perfectly practicable course—implies, might then be turned with the greatest profit, to the beginning of a study of history as a matter of evidence and origins.

This general knowledge of the panorama of history is of vital importance to a proper understanding of that political side of geography which is its crown and completion. The study of geography remains topography and physiography still unless we proceed farther in our study of cause and effect, and investigate its bearings on the constitution and behaviour of human societies. This we cannot understand without making an extensive, even if superficial, survey of the chief facts of history in general.

Any hard and fast distinction that has yet been made between ancient and modern history seems to have little value except as a means of marking off the history of political societies that still live from those that have become extinct or, as has happened generally, have been merged in others. History is one.

History and the formation of opinion

A training in the science of history, to be begun not before the pupil has a very solid groundwork of undisputed facts to build upon, is, speaking psychologically, the best possible means of cultivating the judgment. We teach our pupils at this stage how to use all available means to form just opinions; for history, so far as its end is practical, is directed to sifting the materials out of which opinions are formed. In studies like geometry or physics, there is no room for mere opinion, though there may be for hypothesis; hypothesis is pretty sure in the course of experiment and investigation to be rejected or to become certainty; but history must mostly remain matter of probability, that is, of opinion, to the end. The investigation of the problems of history, then, is nearly connected with the daily problems offered to our judgment; it should help us to "put things together," to appreciate character considerately and indulgently; ~~to give~~ due importance to the facts that matter and to put aside the facts that derive their weight from prejudice, mere iteration, or untrustworthy authority. And these considerations should help to impress on us the conviction that any real study of scientific history must be not, perhaps, entirely neglected, but properly left to a late stage in the school course, to be more effectually pursued in the university.

School history as a preparation for specialised university study

University teachers of history sometimes say that they prefer to receive pupils who have had no previous teaching in history at all, since most university students have to unlearn so much when they address themselves to the study of history as a science. This is unreasonable. For what such sturdy beggars really demand is that the school should forgo a study which even in its preliminaries is of the highest civilising and educating value for all pupils, merely in order to reserve a clear field, a *hortus inclusus*, to the specialists who receive a favoured few for special cultivation at the university. These critics would deny a like privilege to other subjects, asking, in effect, that the elements of all other studies should be properly taught, and the pupils thus specially prepared then handed over, soul and body, to themselves.

The same sort of claim is made by the boat-racing experts and most other specialists. But it is the business, almost the chief business, of teachers, to keep the specialists in their place; and to insist that all specialist efforts should be regulated by general considerations of what is good in education for the greater number of those in our schools, those, in fact, who are not to become specialists. We cannot too often remind ourselves that teachers are not all teachers of special subjects, nor called upon primarily to prepare pupils for the operations of specialist teachers. It is above all things our business to implant in our pupils the habit of regarding knowledge *in connexion*, and we must therefore make the basis of our teaching as broad as possible.

Special branches of History

History has its varieties of application just as geography has. Each serves, in so far as it is a school subject, for the general training of capacity; each is meant to give the learner a general power to interpret facts and to arrange them in the way most likely to suit his particular purposes from time to time. As there is a special application to commerce of geographical facts, so is there also of historical facts. The history of discovery, the history of taxation, the history of trade guilds and trading governments might be called commercial history, and to the man of business are of real importance. Other varieties of history are easy to think of—history of the Church, of the constitution, of military organisation, and the rest—a list almost inexhaustible. But all these special applications must be subordinate to the general training in history which the school is required to give: first the necessary background, and then exercise in the estimation of evidence and in the discovery and weighing of authorities. We cannot ascertain the truth of records unless we know where to look for the most trustworthy account and unless we know how to set one account against another and extract the truth from varying details. History may thus, in the right hands, become a training in patience and temper and intellectual truthfulness, always providing we can exclude the bias of partisanship; and this, after all, may be regarded as easier in the school than it is in the more mature and prejudiced society outside it.

But it remains true that during the greater part of the life at school we can only very cautiously treat history as a science of discovery. Our chief business is to see that our pupils get to know and to remember undoubted facts that matter, the memorable and significant things; and we do this most effectually by cultivating their power of selection, making them read with attention, training them in the power of noting and succinctly recording sets of facts bearing on the solution of a particular problem or illustration of a particular idea, increasing our call for detail as we proceed higher in the school. This done, our pupils will have the key to unlock all history with some profit to themselves; both materially, in the actual gain of information and mastery of general truth, and also in a disciplinary sense, for they will have acquired a most valuable judicial capacity and, perhaps, habit of mind.

The Time-Chart

The use that the time-chart serves in a course such as is here laid down should be very obvious. Every school should have, placed in a convenient place and on a large scale, one or more such charts as those made by Mr. E. J. Ensor, displaying graphically the synchronism of the most notable events and landmarks in history. Just as our knowledge of England as a sectional map is all the truer and more profitable if we relate it to other world-divisions of varying magnitudes, so we understand the bearing of an important event all the better if we know its relation in time to other events; and if this can be most easily and most enduringly rendered graphically, it is folly to despise or to neglect such a device.

The Line of Time

But this may well be supplemented by the Line of Time described by Principal Withers, which is, in brief, a long strip of paper pasted inside the history note-book, indicating to the right and left of the central point which we make our era (the date assigned for the birth of Christ) the position of various great events in stated positions corresponding to their proximity or distance. By means of this strip, which he receives blank and fills up by additions from time to time made by himself, the pupil is perpetually called upon to relate new facts in point of time to all facts, and to recall old facts anew He thus learns dates in a much more rational way than by merely committing them to memory piecemeal, and they are more profitable because the additions arise out of the processes and needs of his own reading.

Maps in History

The map is another absolutely essential device for the effectual teaching of history. It is necessary, first, as a means of fixing in the memory the mere names of places which are of significance in history; a mere mechanical means, perhaps, but one of the most useful that can be employed. The map is even more necessary for the understanding of both the rapid succession of events, as in a campaign, and the slower working of economic forces, as when we have to account for such facts as the powerful isolation of England, the growth of great ports, manufacturing centres, political centres, centres of population, and the like. The historical atlas should be regarded as an indispensable part of equipment, no less than the atlas representing the political divisions of the world as they are. And if the economic meaning of a particular situation on the map is once understood, its exact position will not be forgotten.

Devices of illustration

It is hardly necessary to say that everything that gives reality to the conception which the pupil gains from his study of books is a valuable device in the teaching of history. Models, coins, plans, and the rest serve as objective attachments to much which might otherwise fade away for want of definite hold; and such models as the pupil constructs with his own hands, or such other illustrations as he acquires by his own exertions are, of course, far more effectual than anything which owes its origin to the teacher.

Citizenship

A considerable impulse has been given of late years in the sphere of primary education to a systematic study of the duties and rights of citizenship. It is not unreasonable that a beginning should be made in the primary grade rather than in the secondary, though it is at first sight rather surprising. For it is to be remembered that the primary school age generally terminates, even under favourable conditions, at the end of the fourteenth year, and a curriculum so much abbreviated must needs lack much of the general training which helps the better-prepared pupil to find out for himself what it concerns him to know in regard to civic and national administration. Something must therefore be done to teach the half-educated little citizen what a vote is, what its value may be, the delimitations of the various bodies for which votes are cast, and, above all things, the necessity in a civilised community for ordination and subordination. A boy of fourteen may easily be got to understand the purpose of the common forms of public organisations in securing protection from external enemies and from internal disorder. The constitution of the navy and army, parliament, law, the policeman, and the rest, may be explained roughly in the primary school. It is quite worth while, even as early as this, to enlist the sympathies of the young on the right side, of which they must be got to consider themselves a part, with "a stake in the country" In this grade, the evening school should deal with the more elaborate and complicated organisation of purely ~~local~~ institutions, and to some extent with the elements of municipal and national economy. Such matters as these should certainly be treated in the secondary school, but there hardly seems any pressing reason for isolating them as we are bound to do for scholars of the primary schools. The history lesson should offer sufficient opportunity to the dexterous teacher for little excursuses into civic and economic subjects, but government as a system of duties and rights dependent on large questions of political evolution and economy is a special and technical study, and the appropriate province of the School of Economics.

A word must be said about the historical novel. It is true that it is often inaccurate, often wildly wrong, both in atmosphere and detail. The "Wardour-Street" romance is of little value to any one. But if we choose well, the harm done is insignificant in comparison with the immense gain in forcing *conviction* on the ordinary unscientific reader. Thackeray, Sir Walter Scott, Sir Walter Besant, Richard Blackmore, and many others have made dry bones live and planted a taste for history which more accurate information would not easily have quickened.

I began with a few lines from Charles Kingsley. I will end with a quotation from his great adversary, Newman. He says of Scott: "The general need of something deeper and more attractive than what had offered itself elsewhere may be considered to have led to his popularity, and by means of his popularity he reacted on his readers, stimulating their mental thirst, feeding their hopes, setting before them visions, which, once seen, are not easily forgotten; silently indoctrinating them with nobler ideas which might afterwards be appealed to as first principles". (*Apologia.*)

For reference:—Chapters in *Teaching and Organisation* by Withers, Somervell, and Gonner. Freeman's *Methods of Historical Study.* *Report to* (U.S.) *Committee of Ten* (Washington, 1893). Harris in *Report of the Committee of Fifteen* (U.S.). Mary Sheldon Barnes' *Studies in Historical Method.* Mackinder on the "Scope and Methods of Geography" in the *Proceedings of the Royal Geographical Society*, March, 1887. The same writer's *Notes on Physical Geography*, and *Address* delivered in 1895 to the Geographical section of the British Association. Miss Reid in *Work and Play in Girls' Schools.* H. Yule Oldham in *Aims and Practice of Teaching.* Parker's *How to Study Geography.*

CHAPTER XI

WARNINGS FROM HISTORY

We, look you, boast ourselves to be far better than our fathers.
—Homer's *Odyssey*.

History of Education is a History of Ideals

THE history of education is the history of civilisation. The ideals of a nation, the things that it hopes for and strives for, are the measures of its progress. If its ideals are mean or selfish, gross or pettifogging, we may expect to find either that it is at a low stage or that its development has been arrested. Education is an unerring register of the ideals which a community pursues; for the systems and methods adopted in the upbringing of youth record the things which are understood to determine the future prosperity of the race and the means by which these things are to be secured. If people teach their children this or that, it is because they believe that this or that will vitally affect their children's future; if this or that is omitted, it is omitted either because it is understood to affect the future very little or not at all, or else because some other thing is of greater importance. The subjects of instruction indicate the points upon which the community is prepared to stake its future existence and welfare. In a military age or society, the predominant place will be taken by military arts, because the general sense of the most powerful part of the community tends to the belief that excellence in warfare will be most necessary for its continued life. If the basis of society is theocratic or deeply religious, using the term in its conventional sense, theological studies will have greatest weight. If the ideal of the community is the copious production and easy distribution of wealth, the result is felt immediately on the subjects prescribed for the training of youth.

In the same way the bias of individuals betrays itself in their ideal of education. Enthusiasts for cookery teaching, for drawing, domestic economy, chemistry, laundry-work, sewing, may all (or none) be right; but in each several case their emphatic recommendation of a particular study shows that, for good reason or bad, they think that these things matter supremely for the future of the community; or, as I should prefer to say, for the conservation of the essential parts of the existing framework of society.

Systems of Education as causes and effects

Systems of education are, of course, at once both cause and effect of political and social ideals, a double character which deserves careful attention. They are almost always determined in the main by a deep-seated instinct to withstand change, and they testify to the feeling, not by any means necessarily selfish, that, on the whole, whatever is, is best. They are thus, on the one hand, produced by existing institutions, which are the corporate expression of ideals; and, on the other, their first business is the filial duty of protecting and perpetuating the institutions to which they owe their existence, by promoting the ideals from which they spring. This principle of continuity is, indeed, a great social safeguard. Condemnation of an institution, ecclesiastical or social or political, on the ground that it goes great lengths in order to maintain its influence and identity by monopolising as far as it can the instruments of education, is cheap and easy; but its efforts to this end are really both a measure of its belief in itself and a salutary guarantee that social development or evolution will not be violent.

Conflicts for possession of the schools a proof of vigour in institutions

Indeed, we shall do well to apply these same considerations to all earnest conflicts for the possession of the schools. One of the most convincing proofs of the vitality of our own municipal or local and religious or ecclesiastical institutions, is the keenness of the struggle in what is known as educational politics. No one of the bodies thus striving for local or national predominance could give a surer sign of vigorous life than its desire to perpetuate its ideas in education. Each one believes it knows best what is of most enduring value to coming generations, and is prepared to put its heaviest stake, its own future, on the result of its propaganda. Though there is no necessary conscious selfishness about these strivings, it must be pretty clear that no institution would propagate ideas which it felt to be destructive of itself. And we may go farther and venture to say that no institution would spend its energies on propagating ideas which were not likely to conduce to its own persistence and well-being.

Educational movements throw light on general History, and are explained by it

A study of the history of education, then, will materially help the teacher to understand the purposes and results of many historical movements which might otherwise be obscure. The place of Latin, for instance, in the curriculum of Europe, as explained in chapter viii. of this book, is a kind of epitome of one side of the political, social, and religious history of Western civilisation. Thus also a true appreciation of the place of applied science in the curricula of our own day explains, and is in turn explained by, the very complicated social and religious conditions that obtain amongst us now, And it is clearly the teacher's business to know for what reasons and to what ends his course is laid out for him; the better he understands what is behind and what is before him, the better will he be able to shape his voyage

The history of education records warnings for educators

It would, for the rest, be absurd to ignore the history of education, because at least the more obvious faults of our forefathers supply us with abundance of object-lessons. There are certain errors which betray themselves on "inspection," for deplorable results may have had similar causes to deplore; and though the more philosophical and ultimately more satisfactory explanations may be supplied by psychology, we may be amply justified in attributing certain facts to certain antecedents if our own daily experience gives confirmation. There is a good deal of philosophy in the theories held by the man in the street. In education, as in morals, the daily common sense of mankind has constructed, roughly but effectually, well-understood operative maxims or principles, which have been worked out in practice and are sufficiently illustrated in the history of individuals and of the race. And it is quite possible to look at our records and to draw directly from them warnings and encouragement for ourselves. Some actions which we have generally agreed to call immoral have demonstrably bad effects; we do not therefore wait, before condemning them, to propound a full-grown theory of ethics. Nor need we practise a corresponding economy in education.

The development of education has been twofold: in organisation, both social, religious, and political; and in the procedure used for the discipline of character and the discipline of the intelligence. It is true that the one side of the development is inextricably interwoven with the other, and one will condition the other; but, generally speaking, the organisation or framework of education has been determined by the national or communal aim, while the methods of training and instructing have depended more directly on current theories of psychology, formal or implicit. Errors in both kinds show themselves in unsatisfactory results, but organisation covers a larger ground and is influenced more directly by common opinion, social or political or religious; the details of training and instruction are more generally left to the expert, the teacher. The first kind of error tends to disappear with more liberal conceptions of social duties and individual rights; the second kind, errors of method, reappear with every new teacher.

The twofold development of Education in Aim, and in Methods

In this chapter attention will be directed mainly to errors of aim as expressed in organisation and demonstrated by results in history; errors of method have been more properly treated elsewhere, and particularly in the chapters dealing with Discipline. Most of these errors of aim have their counterparts in modern life, even if they do not always present themselves in their ancient guise.

It is reasonable to suppose that with our remote ancestors, as with ourselves, the first teachers were the parents; it is equally probable that then, as now, they used the most sagacious "Kindergarten" methods, the methods suggested by parental instinct to the mothers of most animals, until the pressure of circumstances and the need for organisation cut their patience short and set them theorising, as rule-of-thumb people will, and sometimes, after the manner of those same,

The primitive aim and organisation of education, in the family, are perfect taking short cuts that save no time. The primitive aim, the aim of the isolated mother or father, is the best of all aims: the good of the individual children; and if there were nothing in the world but parents and children, organisation would be perfect because perfectly simple.

Social complications and exclusiveness

But as soon as education in the family comes to be organised in relation to other families, perhaps the first thing that strikes us is the mysteriousness and exclusiveness that goes with learning. This is, after all, not surprising. It has always been considered a duty to keep up family tradition; but the ancient family tradition appears generally to have been, as it was undoubtedly amongst our predecessors in civilisation, the Latins and Greeks, a tradition of common ancestor-worship, with which were associated set ceremonies and formulas communicated only to members of the same gens or sept. The man who knew what was the right thing to say or to do at a given ceremonial crisis was the "man of family"; and this is the origin of our own notion of gentle-hood. A nobler individualism has transmuted this notion, and we are more generally inclined now-a-days to give the title of gentleman to any man who bears himself seemly under any circumstances.

Learning as a class mystery

But before we arrived at this stage, even yet not universal, learning has constantly presented itself as the exclusive privilege of a class; this or that corporation or caste has preserved its secrets jealously not merely because the possession of them conferred distinction but also because they were profitable. The priests of ancient Egypt were not merely the custodians of the temples, but the politicians and professional men of their day, as befitted members of the highest caste; they even had their own cryptic kind of writing. (It is curious, by the way, to notice how in Egypt whole races have until yesterday still monopolised certain functions. Even now, the accountants and clerks in the service of Government are almost all Copts, and to Copts the like duties have been assigned from time immemorial.)

The caste system of Brahmanic India survives in great strength, though of course necessarily modified by civilising agencies tending to break it up. And the whole of it has tended to the elevation of the highest or Brahmanical caste above the rest. But even India is a poor example of the strength of the learned tradition when compared with China; for China, not split up into castes, yet distributes its highest posts as the direct reward of mere learning, which is, in the main, interpreted as a thorough knowledge of prescribed ceremonies, and is, in fact, confined to a comparatively small class. It is to be remembered that China is in our own day the very sanctuary of ancestor-worship.

The Arts follow Learning

Learning is, to be sure, not education; but it will be found that the institutions which confine the most valuable gifts of tradition to an exclusive class limit in the same area the practice of those arts which are felt to refine and civilise. The Persians did not teach their slaves to ride and to shoot, nor did they expect them to speak the truth. Amongst ourselves, at the time when book-learning was regarded as a privilege of the "upper classes," it would have seemed to be mere midsummer madness to teach drawing to the "lower classes"—nor indeed was this done until it was shown that drawing had an industrial value which could be expressed in terms of profit to employers.

Exclusiveness is demonstrably most pernicious when it is hereditary, as it seems to have been in its earliest stages,—if, at least, we attach any importance to the testimony afforded by the worship of ancestors. When, however, an exclusive profession recruits itself from without, it acquires a strength in proportion to its power of attracting and assimilating the choicest spirits. The Roman Catholic Church of the middle ages and the Renaissance was the only institution of first-rate importance that offered a career indubitably open to talent drawn from any and every rank. And its prizes, or, at all events, its patronage, were not confined to any one art; it could find room for a Fra Angelico and even for a Fra Lippo. The Church was not a whit more selfish than the other guilds and societies that were contemporary with its unquestioned supremacy; it was only more catholic.

The exclusiveness of corporations recruited from outside

In truth, the Church contained within itself the sovereign antidote to the exclusiveness of which it seemed to be, and was, the most striking expression; theologians may, and do, maintain that its exclusiveness as a governing organisation was only another side of its true universality. Its greatest gift—apart from all questions as to its claims to be the appointed custodian and channel of divine grace—was the persistent witness which it bore to the great Jewish conception of the equality of all souls before God, the equal worth of each individual, his equal duties and equal rights.[1] The Church could not give equality of opportunity; it was not she, as a spiritual corporation, that could, of right, raise the humble and bring low the proud; but every soul had an equal claim to her sacraments and to what she regarded as the covenanted

The Catholicity of Semitic religion

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[1] "I am a Mosaic Radical," said Cardinal Manning in our own days; "My watchword is, For God and the People." (Purcell's *Life*.)

means of grace. Just as the covenant of Jehovah had been with his people Israel, with every individual of the nation, Benjaminite no less than Levite, so it was with every individual in the Christian Church, layman or Pope. It is clear, then, that at times when, under the influence of hereditary or caste claims, society was still organised in almost impermeable *strata*, the Church preserved the characteristics of a truly democratic body in, first, admitting all comers on their merits to its hierarchy, and, secondly, in giving every single human being an equal right to its ministrations and to its promised heaven. The greatest of the Greeks never quite shook themselves free of the obsession produced by what they saw in the scheme of things existing around them; a man to them was either a freeman or a bondman; he still belonged to a class. Having no working conception of a God before whom all, great and small, are equal, their schemes of education either provide for the education of people in the class to which their original birth-status has confined them, or else prescribe a course different in every sense for persons destined by selection to special functions. Even Plato's Socrates provides for the education of Rulers and Soldiers alone. There is no proof that Greeks or Romans effectually recognised, except under the influence of Semitic ideas, the spiritual equality, and *therefore* spiritual responsibility, and *therefore* spiritual freedom, of man. Equality, Responsibility, and Freedom are three facets of the same gem.

A "liberal" education for every "soul to be saved"

Whether we have liberated ourselves in these days from the prepossessions of caste is a question which few of us could answer frankly. But in so far as we believe that every man and every woman has "a soul to be saved," we shall be more generous in our views as to what constitutes a claim to a "liberal" education, the education which is to teach a free being to use freedom properly. Many a one of us may be prepared to hold, as a sentiment, that every individual is equal before God and should therefore be equally precious in the eyes of his fellows; but the sentiment falls short of being a real belief so long as we are not prepared to take action upon it. Our service is lip-service, and our talk is cant.

Excessive deference to Tradition

If social and spiritual exclusiveness has proved an obstacle to the development of the education of man, and has sacrificed the common man and woman, an excessive deference to authority and tradition, especially literary tradition, has, in its turn, done its share to contract the conception of education where it has been undertaken. Social exclusiveness confined the benefits of education, in its liberal sense, to a few; deference to tradition tended in time to give these few not the best education available but an education too exclusively dependent on written records. This was natural enough. After all, tradition is a pretty good practical guide to what is likely to succeed; at all events, it represents the wisdom of experience. The wisdom of experience can be imposed only as the voice of authority; and authority, Protean as it is, acquires most definite form in literature, whether we call it sacred or profane.

Authority not merely "a necessary evil" but a fact of the universe

Authority is not, as it has been called, "a necessary evil"; it is not necessarily an evil at all, any more than any other power in the Universe is an evil. Inequalities are matters of fact; men are not born equal although they are, as spiritual beings, entitled to equal consideration. If the world were a cosmos of equal forces instead of a cosmos of forces harmonised in fluctuating equilibrium, if there were no greater and less, no higher and lower, no commanding fathers and obedient children, no straining natural agents harnessed in the service of man, we should be at a standstill, cease to exist. We can live only by the perpetual exercise of and submission to authority. "Conscience," says J. H. Newman, "is an authority; the Bible is an authority; such is the Church; such is Antiquity; such are the words of the wise; such are hereditary lessons; such are ethical truths; such are historical memories; such are legal saws and state maxims; such are proverbs; such are sentiments, presages, and prepossessions."

The practical problem is to what kinds of authority we should willingly submit, and how far; the philosophers and theologians are divided mainly upon this very question.

The authority of the book and reverence for its appurtenances

Now, for good or evil, the authority of the book has played an enormous part in the development of humankind, and notably in the history of Jews, Christians, and Musalmans; all of them, in the language of the last, People of a Book. Reverence for the Bible as revelation we must not discuss here; but it is of great importance to recognise that reverence for the written word as the depository of divine truth has led, in a remarkable degree, to an excessive, because exclusive, reverence for its accompaniments, the antiquities and apparatus of literature. The Book itself being so important, everything that fixes it, illustrates it, explains it, acquires an all but equal value. So, as a first consequence, you get a Mishna to explain the Law and a Talmud to explain the Mishna; the Gospels, Acts, Epistles, and eighteen centuries of textual commentary; the Korân and innumerable expositors, who count up exactly, as the

Masoretic text of the Jewish Canon was counted, the words and letters of which the scripture is composed. And as a second consequence, you get an ineradicable general reverence for mere literary form in other works, an almost inevitable result of the additional honour with which the one Book is invested by the labour spent upon it.

When this reverence is extended to books not in the canon, we are permitted to think that it has had too large an influence on schemes of education. It has fixed all eyes on literature, or, rather, on its antiquities and apparatus, to the exclusion of other things. And yet here again the Church preserved within itself the antidote to the bane. The "secular" learning of the Renaissance attenuated itself at last into an excessive and barren respect for literary authority, for form; but the logicians and creed-makers of the Church dealt with what they demonstrably believed to be realities, things that mattered as life and death matter. We may take what view we like about each of the endless religious controversies; but their preoccupations were clearly the antithesis of those of mere formal scholarship. If a text was to be settled, it was as a question on which human salvation was staked, and it is this vital quality which distinguishes the ceaseless process of Christian disputation down to our own day. Theology, in fact, whatever it may be now, has for centuries served to divert Western education from the worship of mere form, and it is fair to believe that if Brahmanism, or Confucianism, or Islam had stirred the same earnest strife on the formulation of creeds, the minds that have spent themselves for centuries on vain repetitions and elaborations of literature would have struck out a practical and progressive philosophy. Lord Chancellor Bacon may have thought little of the cobweb

Religion and real studies

of the school-men, yet he was their heir, and enjoyed the fruits of their strenuous labours; he stood on their shoulders, and saw the promised land which they never entered.

The early Renaissance a worship of form

Every one knows how the worship of literary form worked out in the first period of the Renaissance. It may be, as Mark Pattison said, that there was a great gap in the cultivation of the literary art until Greek was rediscovered, and until comparisons instituted between Greek and Latin authors and their works set people formulating literary laws; but the truth seems to be that the reading public of the middle ages, that is the clergy, were too busy with the *matter* of the Roman writers and the Fathers of the Church to give much time to rhetoric and style. With the Renaissance came a conception of education as a training in Latin and Greek classics, with a sort of implicit belief in the sufficiency of such a training as a complete preparation for life, concealing a remarkable deterioration in the significance and quality of the problems which the learning so acquired was to solve. In fact, a knowledge of literature is indeed necessary to fulness of life, but, if it is to be effectual as training, it must be used with other studies for the investigation of other problems—religious, philosophical, historical, scientific—and must not concern itself merely with its own apparatus and appurtenances, that is, with mere form.

The classical languages

This worship of literary form was secondary, to be sure, to the excessive value set upon the Latin and Greek literatures as the depositories of all knowledge, the effects of which have been denounced by every reformer from Bacon downwards; but we must not forget that, of the two, Latin in particular long and justly retained an important place in the hierarchy of studies, which it has not yet lost, merely because so much of the records of organisation and discovery,—of art, of religion, of law, of medicine,—was written in that tongue.

Of the unsatisfactory result of taking the old classical method of language teaching as a model for the teaching of languages still in daily use, I have spoken in a previous chapter. The mischief began in the practice of teaching the classical before the vernacular tongue, which necessarily concentrated the main attention on the instrument of instruction rather than on the subject-matter, whatever that might be. If everything is to be taught in a foreign language, most of the teaching will be language-drill; if the teaching is mostly language-drill, then analytical grammar—accidence, and the like—will acquire an importance altogether excessive. We must, as Ratke pointed out, teach first and mainly through the vernacular, so that mere language may keep its proper place in the scheme of studies, and not be elevated at the expense either of literature or of other subjects.

The conception of man as a citizen

The origin of some of the most serious errors in the aims and organisation of education is to be found in the conception of man as a mere citizen. It is easy to see how the necessities of common defence banded families together against external foes, and it is equally obvious that this necessity threw all chief power into the hands of those who disposed of the communal weapons. Thus the pressure of external danger helped to establish internal law and order, which is necessarily based on physical force, so long as the best energy of the community is drawn to the maintenance of such force by the need for vigilance against powerful foes outside, who menace th community's very life. Hence come ordination and subordination, generals and soldiers, kings and subjects; and the most emphatic teaching of the commonwealth is that every man must comport himself as befits his place in it. "Virtus" itself, the name given to the quality most useful in military arts, is the Latin word for the whole perfection of character, as was also the Greek word corresponding. Except in terms of the prosperity of the state, a man had no value. Roman and Greek philosophy and history are full of this lesson, and it survives in some very obvious and some rather obscure forms in our own day.

Not a good criterion in education

The civic standard of worth is not a good criterion of the value of education. In the first place, it assumes that the existing state-organisation is final, and that therefore a man's ultimate and highest function can be found in the framework so constituted. He must, in consequence, be prepared strictly for the position which he is certain to occupy; and it is perfectly clear that dominant classes will view with the most serious disfavour any indication of a tendency to obliterate distinctions of rank. That is, the civic standard must primarily tend to keep people stationary, to determine their whole lives by what Maine calls *status* rather than by *contract*. It leads, in education, to the prescription of schemes of study or training designed for the comparatively narrow purpose of preserving existing institutions. It is clearly less hard to provide for the safety and conservation of the established state of things than to make the way easy for the most perfect and varied development of individuals. So powerful is this conservative sentiment that even the perpetuation of a particular political constitution, nay, of a particular dynasty, has been represented as a duty not civic only, but religious; and of this opinion Europe of to-day provides examples in high places. So, from an adoption of the civic standard, we may get not only an excessive respect for things constituted, but also a perverted, grotesque, and even monstrous "patriotism".

The standards of the "practical" man and the "scientist" are both civic

We do not rid ourselves of it when we have (if indeed we have) set aside all military considerations. The "practical" man and the "scientist" are using the same standard; they also are measuring worth by its value, as they conceive it, to the community. It is true that the material profits on which they base their judgments may be more generously diffused than are the advantages of a military system; but they still estimate a man, not by what he is, but by what he contributes to the stock of things. It is true that the conditions of their success are more fluid than are those of military prosperity; there is greater mobility and interchange of classes; but they set up in education a test which is easy, indeed, to apply, seeing that it is expressed in terms of production, but most fallacious as a guide to the educator, who should be considering not what his pupil can do or make, but what he is becoming.

Education cannot be measured summarily by material results. We may, to be sure, be justified, as has already been shown in this chapter, in condemning a system or systems of education which, after long trial, have not succeeded in doing what they set themselves to do; but we must observe the chief condition of all valid induction *per enumerationem simplicem*; our observations must at least cover a very large area. And, in the schoolroom, the teacher must remind himself again and again that he is not making good men by cultivating merely his pupils' powers of production, nor will he form a fair estimate of them by what they *do*, but rather by what they *try to do*.

The status and education of women in relation to the civic standard

It may not always have been noticed that the status of women has been lowered and their education corrupted by this same civic standard of worth. If women had been able to contribute as directly as men to the offensive and defensive power of the state, they would always have shared equal consideration and have been treated as well as men in schemes of education. Women are now enjoying the same consideration as men and equal chances with them most unrestrictedly in those communities in which the civic standard is least strictly applied, and especially where there is least militarism. The state organised on the military basis will, of course, devote its best efforts to perfecting its military class and organisation. The state which is organised mainly on an industrial basis will honour most and educate most assiduously those persons and qualities that are aptest for industrial production; this is why the girls in our primary schools, and in some called secondary, are occasionally taught, without protest, just as boys are taught, not a few subjects which, except on commercial or industrial grounds, have nothing to recommend them. Such are among the results of applying the civic standard in its modern form. The industrial principle is, indeed, an improvement on the military principle of organisation, but the one is a transitional stage no less than the other; and neither is a good standard in education.

The *Civitas Dei* is the only state which might justly grade men according to the efficiency of their citizenship, but it is generally agreed that it is unsafe for human societies to claim for themselves the privileges of the divine kingdom; the best we can do is to cultivate in our pupils the desire to deserve the gift of its freedom.

Psychological Errors

Psychological errors, that is errors arising out of mistaken views as to the constitution of the human mind, seem to divide themselves under two main heads.

The first of these was put into its most striking pedagogical form by Locke, although it was implicit in most of the educational practices of his predecessors. He regarded the pupil's mind as a *tabula rasa* or sheet of white paper on which anything could be written. Sensation and reflection are only more or less complicated forms of the same intellectual operation; and you may therefore begin to reason with your pupil from the first, and from the first expect him to perform the most complicated mental operations. The effect of this view was to exaggerate the power of the teacher, and to leave him free to exact whatever he chose from the pupil without regard to the gradual development of mind, or, indeed, of even the logical order of the sciences.

There is next a doctrine which has taken various forms, but under all guises lays it down that the main work has been already done by Nature. The child is either, as Rousseau formulated it, "good, as he comes out of the hands of the Author of things"; or he is, as so many theologians have held, hopelessly vicious and therefore to be perpetually coerced.

These theories all represent very partial truths. We can agree heartily with Locke that teaching can do a great deal; with Rousseau that the teacher's interference has often been excessive and injurious; and with (say) Calvin that evil tendencies are strong in the natural man and call for strong measures of repression. But the way out of all the psychological difficulties seems to be the frank recognition of life itself and childhood in particular as a process. The child is not merely a little man, but something not-yet-a-man; his mind not yet equally capable of all operations, but growing in complexity and power. This is the great lesson which we learn from Pestalozzi and Froebel.

For reference:—Quick's *Educational Reformers.* Compayré's *History of Pedagogy.* Painter's *History of Education.* Rousselot's *Pédagogie.* Cadet's *Port-Royal Education.* Guizot's *History of Civilisation in Europe.* Lecky's *History of European Morals.* Laurie's *Occasional Addresses* and *The Rise and Early Constitution of Universities.*

CHAPTER XII

THE MAKING OF THE TEACHER

"*Such address and intelligence as I chance to possess*," said Mr. Micawber, "*will be devoted to my friend Heep's service. I have already some acquaintance with the law—as a defendant in civil process.*"

—*David Copperfield*, chap. xxxvi.

Specialisation of function makes the training of teachers a necessity.

IT ought not to be necessary to prove to this generation the need for some technical preparation of its teachers for their work. The whole trend of the time is to division of labour, and if ordinary men and woman are to discharge special functions satisfactorily, one would naturally think that they must have something besides the ordinary training. The butcher, the baker, the candlestick-maker, are all inducted under supervision into the practice of their respective crafts, and they must all be the better for it, or else the practice of training them for their work would long ago have been discontinued. The work of teaching is not such work as can be undertaken by any one "dumped" into it at any time of life without preparation.

At the same time the opposition to the special training of teachers, such as it is, should not be dismissed as mere obscurantism or prejudice. It is based partly on a very wholesome sense of the primary importance and effectualness of a liberal education as a preparation for any profession; it is a protest against the excessive specialisation which makes men one-eyed and one-sided. If a liberal education is the chief thing necessary in any walk of life, it is most indubitably indispensable to those who are to teach others how to walk through life, more necessary than any other part of their equipment. And a teacher's information must not be wide only, but exact as well; for as R. L. Stevenson said, "a man must be very sure of his knowledge ere he undertakes to guide a ticket-of-leave man through a dangerous pass". Any scheme that affects to give a teacher the power of teaching others something that he does not himself know, which is the definition of training once scornfully propounded by a supercilious and badly informed critic, is self-condemned; only this same critic had not conceived of a system which required the aspirant to get something approaching exact knowledge of the object as well as of the subject of instruction. It is emphatically true that one of the first qualifications for teaching well is a liberal education, and that nothing will take its place. But that is not the only equipment necessary.

Yet opposition to the training of teachers is not mere prejudice

Something further is to be said for the view which deprecates the general systematic training of secondary teachers for their profession. There are different grades of teaching, the result not of mere class prejudice or selfish political action, but of hard social and economical facts; we may, we ought to, do what we can to attenuate distinctions, but we cannot ignore them. The primary teachers, in comparison with their brethren in other grades, labour under two marked disadvantages which impose upon them a more pressing need for training. In the first place, they have had to acquire the liberal foundations

Primary teachers' greater need of training of their own education under all but insuperable difficulties; a liberal education calls for a certain leisure during adolescence, whereas the young primary teacher has, for the most part, spent his most strenuous years in earning his living. The Training College can undo only part of the mischief which economic conditions have made inevitable. The liberal education of the bulk of our primary teachers has been therefore a perpetual struggle against adversity, and can hardly be said to be uniformly satisfactory in the end. The many examples of exceptional individuals who have burst the bonds of circumstance and acquired a cultivation and range of knowledge which greater leisure could hardly have augmented serve only to prove the general rule.

(1) Because of their own difficulties in securing a liberal education

The next consideration gives a dubious force to the arguments of the few who oppose the training of teachers for the secondary and higher grades. An inferior teacher may safely be entrusted with work in the secondary grade, whereas in the primary, if the best effects are to be secured, none but the best teaching is good enough. We tend to forget the extreme importance and effectualness of curriculum and environment. In a real secondary school the range of the subjects of instruction gives a proper place to Language, to genuine Mathematics, to History,—in short, to the "humanities"; and pupils have the necessary leisure to work by themselves, enjoying at the same time an environment that of itself civilises and expands. In such a school, therefore, a vast amount of educating work is done by pure curriculum and environment; and the teacher may be, and he often is, entirely lacking in the technical knowledge needed to

(2) Because much of the work of secondary teachers is done by curriculum and environment

make a very little opportunity go a very long way. Now this last need is just the peculiar and ever-present problem that confronts and is successfully tackled by his brother in the National or Board school; who, manipulating an inevitably starved curriculum, dealing with children often demoralised by home surroundings and street experiences, struggling against such most depressing circumstances as the spasmodic attendance and physical incapacity of his scholars, labours from morn till night to turn out good citizens—turn them out straight from the school into the work of making a living. The primary teachers, and it may be added, those who administer the primary system, are compelled by economic facts to make their bricks with the smallest modicum of straw. From such difficulties the teacher in the higher schools is relieved by the automatic virtues of a richer curriculum and more civilising surroundings; so that the primary teacher must be taught to do what is already done for his brother by "the nature of things". He should therefore be a better man, better educated and better trained. He should know better how to economise teaching force and how to get a great deal done in a very short time; he must have a better knowledge of the mistakes recorded in history because he cannot trust to time to undo any he may commit himself; he must have reasoned schemes and technical devices where his brother can rely for help on a hundred other influences of curriculum and society. In short, he must be a better man.

But neither of these considerations proves that the teacher of the higher schools is in no need of training; they prove merely that an untrained teacher does less harm in a secondary than he would in a primary school; and they explain in some measure the disinclination sometimes shown to admit the need for the training of secondary teachers. Yet most secondary teachers begin their career as Mr. Micawber began the practice of the law. He was well acquainted with the law, as a defendant; they are well acquainted with teaching, because they have been taught.

Before proceeding farther it may be boldly laid down that no one who has had any real acquaintance with the procedure of training, even on such generally unsatisfactory lines as those which obtain in this country, and who has had the opportunity of seeing what training can do for the ordinary person, has ever doubted the efficacy of the process. And when critics point to themselves and say that *they* were never trained and have yet done pretty well, they are certainly open to the retort that they might conceivably have been the better for training.

The fact is that training at least enables a teacher to teach all that he knows, to turn all his wares to profit. The untrained teacher may or may not be so effective; as a rule a good deal of at least his earlier work is wasteful and unnecessarily exhausting.

Let us see what can be done for the teacher, and why.

Natural aptitude the first necessary qualification

The first necessity is to be sure that the natural aptitudes and sympathy are not lacking. A sympathetic imagination and a taste for teaching are the gifts of Providence, not to be conferred, though they may certainly be improved, by study and practical training. The fact is that a teacher is both born and made. On the other hand, it is difficult to discover the aptitude unless the candidate is brought into actual contact with the problems of teaching a pupil or pupils in the flesh; and this fact is a sufficient reason, if there were no other, for some sort of modified probation or apprenticeship. At all events, no one ought to enter definitively on the career of a teacher before he is well assured that he possesses the chief constitutional qualities that make for success.

Next, a liberal education

He must next have a good liberal education, such an education as will enable him to make a just survey of the field which he is to deal with, in its double aspect, of character and intelligence to cultivate and of material to be used in instruction. He must certainly not be a mere specialist, informed in his own "subject" alone. However willing such a teacher may be to listen to the claims of other "subjects," he is yet liable to the danger of attaching an excessive importance to the study over which he has spent his own absorbing endeavours. It is, in fact, one of the duties of the trained teacher, aided by the man in the street who has himself had a liberal education, to prevent the domineering of the specialist; and a man will teach a "special" subject all the better if he has been subjected to the moderating and widening influence of a good liberal education.

The qualifications and place of the form-master

It must be remembered that what we have to say here applies mainly to the general preparation for such duties as are usually discharged by the form-master. The tendency to distribute studies amongst specialist teachers is very much to be regretted, for it necessarily limits the area which the form-master controls; and yet it has even been suggested that "English" should be taught by a specialist. It ought to be clear that until pupils have advanced a considerable distance, it is most undesirable to divide up the direction of their work in several hands, if only because they thus lose the advantage of the consistency of treatment which is secured by the form-master's interest in individuals.

A form-master ought, then, to be an all-round man; or, at least, his education should not have been specialised too narrowly. If he has been, as he should have been, a member of a university, he will almost certainly have ultimately followed some favourite line of study in particular detail, but it may be taken for granted that the more general and "humanistic" the foundation of his studies has been, the better qualified will he find himself for the management of a form. We need not dispute, what is now often enough maintained, that a liberal education may be constructed round almost any "core,"—science, history, geography, and even "commerce"—but there is general agreement, even amongst teachers of science, that the humanistic element should preponderate at all events in the school.

If the future teacher is fortunate and well advised, he will graduate before he applies himself to the study of education. But whether he does so or not, he must recognise that the preparation for his work has two sides, both of unmistakable importance, the practical and theoretical.

Practical preparation for teaching

The practical side is, in my opinion, by far the more indispensable. For it is by practice in the schoolroom, and not by the reading of books or by discussion in the lecture-room, that a young teacher "finds his legs," or arrives at the timely conviction that he is incompetent. If first-hand experience is postponed until the whole of the theoretical foundation shall have been well and truly laid, a double disadvantage is incurred: the tiro may either find that he has travelled a serious distance on a career for which he is unfit; or, if that danger is safely avoided, he will lose the only means of making his reading profitable, observation and experiment in school, made concurrently with his studies in theory and giving life to them.

It is essential that the practical work undertaken should be continuous and intimate. A merely occasional lesson or a perfunctory series of visits of observation do not allow a young teacher either time or opportunity for testing his capacity to stand alone or to deal with a class under the strain and monotony of daily intercourse. And the single lesson, devised, it is to be feared, for examination or parade purposes, tends, like all examinations, to emphasise the collateral and not the main conditions of the work—the plan of *this* lesson, without regard to its place in a whole scheme of instruction; the "illustrations" and "objects" that can be paraded before the class; the black-board summary which the teacher has determined beforehand is to be the outcome of his teaching, whatever may be already in the heads of the wretched victims.

The young teacher should have dealings with his class long enough and continuous enough to enable him to make and record observations in detail of individuals. Such records may be of no great value for the purposes of generalisation, but they will serve most profitably in directing the work and unifying the scattered impressions of the observer. Moreover, it is worth while to note here how desirable it is that a teacher's experience should begin with young children. In the first place, the organisation of a school designed for such pupils will be of necessity simple and therefore easily understood. Moreover, the relation between the liberal or formative part of the curriculum and other "subjects" imposed by the circumstances of the school will be less complex. Again, the

Begin with the teaching of young children pupils will be less self-conscious, and in a more ingenuous stage of mental and moral development than if they were adolescent; for in adolescence the material for observation is more reflective, more intricate, and more fruitful in obstacles. And, most important of all, it is easiest to see in the young child the intimate connexion between mind and body and the dependence of mental and physical states on one another, which so vitally affect the conditions of teaching and discipline.

Observation of good teachers

It is not less important for training that the student should see endeavours made by accomplished teachers to carry into effect the injunctions and conclusions of the lecture-room. It is not necessary here to urge at length the exceeding value of suggestion by example; the whole body of our experience is full of it. The best preparation for the systematic professional study of teaching is to have been taught well; every practical teacher knows how deep his obligations are to those who in his own case set a pattern of careful, thorough, and patient work. But the example set by the trainer should not, as Dr. Findlay[1] shows, be vitiated by the notion "that the lecturer on Education or other experienced teacher should display himself as a model of perfection to his students," to be followed blindly and slavishly; though "the theoriser can never be safe unless he follow the inductive method and builds up his doctrine out of his personal experience as a teacher". Nothing else will prove to the student that to become a good teacher one must teach well, and that, though other things will help, nothing else will take the place of earnest effort. 'Only the sight of goodness in action is effectual to teach practical morality, and the good man, not the good theoriser, is the father of right action. "Does a man who is in training," asks Plato in the *Crito*, "and who is in earnest about it, regard the praise and blame and opinion of *any* man, or of that man alone who is a doctor or trainer?" To be listened to with effect, the lecturer must *show* his competence to do what he assures his pupils can be done. Unless he does, they will not believe him to be a trainer.

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[1] I cannot refrain here, although I differ strongly from Dr. Findlay on one or two points, from expressing my admiration of and general concurrence with his paper on *The Study of Education*, in the Education Department's *Special Reports*, vol. 2. Its main contentions and arguments seem to me conclusive.

Theory and Practice

We must now ask what is the relation of theory to practice in the cultivation of teaching capacity.

There are many things which mere thinking will not do; for instance, it will not add a cubit to a man's stature nor an inch to his chest measurement. But we do not know how effectually we can devise means to a desired end until we have tried. It is doubtful, perhaps, whether means can be devised to make a man tall—though illegitimate procedure may give him a false appearance of height—but it is certain that proper exercises will increase the accommodation provided between his ribs for a supply of air. And we are assured by those who have tried, that we can reason out means for improving the teaching capacity of all people who have the capacity by the original gift of Providence. We cannot, of course, give capacity to those who have it not, any more than we can construct a barrel round a bung-hole.

Theorising in education is nothing more than seeking a reason for success in educating; if we can find the reason, we have a valuable hint for further procedure. And it is quite worth while to remember that good teaching was not invented in the eighteenth or nineteenth century; so we start with some material by the gift of the past. If, however, we theorise without the genuine opportunity of seeing our ideas worked out in practice, either by our own efforts or in the work of others, and of varying procedure or seeing it varied, we inevitably fall into the pedantry of "methods" and "systems". The untrained and badly "trained" teachers are equally the victims of "methods"; with one difference. The badly trained teacher probably uses procedure which has at all events been the subject of some sort of discussion and public criticism, whereas his untrained brother habitually adopts procedure which is the result of his own manufacture and has probably been amended by no other man's counsel. The science of education is no more an exact science with indisputable premisses ascertained and affirmable, as a religious dogma is affirmed, than is the science of conduct. It is not Religion, nor Logic, nor Psychology, nor Ethics, nor Sociology; but all these things and some others. The purpose of education, whatever our formal definition may be, is to influence people in such a way that they may have the will and the power to advance when the teacher's stimulus is removed. The study of education will therefore necessarily comprise all those sciences which concern themselves with the history of man, his constitution as a living and thinking being, and the purpose of his being.

Education as an empirical science

Now it is perfectly clear that we cannot wait until a student has gone through a voluminous and complete course of history and philosophy before committing to him the duty of teaching. This would be pedantry indeed. Duties even more serious and far-reaching than those of teachers are imposed by nature on mothers and fathers without,

We learn how to teach by teaching

unfortunately, the production of any certificate of competence. Pedantry would make rules and endeavour to fit the facts of the universe in accordance; it is our business, rather, to make the best we can of facts as we become acquainted with them.

The post-graduate student of education may be required to proceed systematically through a process of inquiry into the aim, the administration, and the practice of education; and under these heads there is no doubt that the topics bearing most directly on the conduct of teaching and of discipline can be most conveniently treated. But there seem to be certain general considerations by which the less fortunate ordinary practitioner may in the meantime guide himself. He will do well ultimately to proceed through the complete course, if he has the time and the means; but what shall he do in the face of his daily difficulties?

A shorter course for the acting teacher

He will generally have to accept his curriculum as it is provided for him; and he may console himself by the reflection that whatever he may think of it in details, it is the general result of what experience has shown to be the current need. He may and he ought to have his own views of the value of the curriculum as a whole, but he must contrive his best to get the utmost possible out of the means provided. Tradition very properly gives us the lead, because tradition is our fathers' wisdom; and our fathers' wisdom is the complex result of the experience of many generations. This tradition affects not only the curriculum, but also the procedure of teaching, in which his own views and principles will be more easily applicable. It is worth while to warn the young teacher not to throw aside a traditional procedure in favour of a new "method" with-

Tradition

out very serious reason and without bringing everything connected with it to the test of experiment. For instance, as is elsewhere shown in this book, it is possible to give a too universal application to a pseudo-Socratic "method," or to discard on most insufficient grounds the splendid exercise in the logic of discovery known as the construing lesson, merely because the one is new, or is supposed to be new, and the other is old and associated with the study of "dead" languages.

Class-work

After interrogating tradition, his next chief business is to make the best that he can of his own opportunities for gaining experience and making experiments. His own honest and original observations and investigations are of more value than the records made by a dozen other people, however acute they may be.

Teaching with a reason

He must next rationalise and justify what he does, correct his mistakes, and acquire guidance and suggestion, from a study of all the sciences that may throw light on his material; that is, on his pupils and on the subjects of instruction. It is not to be supposed that he must be always working out his theories of pedagogy consciously. Life is not long enough; nor, for the rest, would his work then have the spontaneity and decision which is one of the necessary conditions of successful education or instruction. I quote Dr. Findlay again. "If a student," or any young teacher who wishes to know his tools properly, "is set to teach Algebra, he must inquire into the nature of Mathematics and into the mental processes by which the ideas of algebraic symbols are acquired; he will prepare each lesson, step by step, referring every stage of his operations to the theories which it illustrates. In later years, as a practitioner, he will have no leisure to think out the formal steps by which he conducts his work; nor will he need to take this trouble, for his training will have given him correct habits. The preparation which occupies the beginner for hours of anxious thought can be completed by the experienced teacher in a few moments, just as a skilled physician can make a rapid diagnosis of a case which occupies a medical student for days, since the latter is only acquiring the habit of thought which has become the familiar property of the physician by long usage."

It must be remembered that the counsel given in this book, and especially in this chapter, is addressed to the student of education who has no means of postponing the serious business of teaching until he has satisfactorily traversed the circle of sciences bearing directly on pedagogy. He is, in my opinion, bound for practical purposes to rely first on tradition, and secondly, on a daily empirical method which can only gradually rationalise itself as he reads and thinks, he cannot, with any prospect of immediate satisfactory work, attack problems of aim and administration in any other way. To try to do otherwise would be, if the views here presented are correct, to paralyse action.

The three special studies

But he can get direct help in his work from the special and systematic study of three subjects: from the history of educational theory and practice, from logic, and from psychology.

The history of education

It will be noted that the history of educational theory and practice is not the history of education, which, as has been shown, may be made to cover nearly the same ground as the history of civilisation. The school is a little world, and the history of schools and scholars and teachers in the little worlds that prepared for the great world would be only general history in another aspect. But it is quite possible to get considerable profit and practical guidance by isolating facts connected with education,—the lives and work of active teachers and influential philosophers, school practices, plans of instruction, devices of, discipline, and the like—and endeavouring to interpret them in the light of what seem to be their results. Some facts occur so uniformly after others, as we have seen elsewhere, that we are justified in arguing "on inspection"; in regarding the first as causes and the second as effects; and if what we know of the constitution of the human mind leads us to expect such process, it is perfectly safe and desirable that we should act upon our discoveries. The life and work of great teachers, the accounts of their struggles, their successes and their failures, are just as valuable for guidance in the practice of education as the biographies of good men are in the practice of virtue.

In the study of the history of educational practice we must include the reading of the great architectonic works of the famous educational thinkers. And here I venture to repeat words originally used in a somewhat different context.

We should read the great writers

In every branch of study, and in every stage, the same principle holds good. If we are studying a science, it is the great book, not the text book, that is most important in education. In biology, it is from books like the *Origin of Species* that the student derives the most real help and the truest inspiration; in mathematics, Newton's *Principia* and the like are the great stimulators; in history, the student is rightly sent to Thucydides, or Mommsen, or Gibbon, or Freeman; in education, nothing can take the place of the study of such writers as Plato, or Locke, or Rousseau, or Froebel, or Herbart. The profit of such reading lies not merely in the subject-matter; that may be disputable—it *must* be disputable. The theorising may be philosophically unsound, the practical maxims may lead us to absurdities, just as in pure literature we may heartily dissent from the morals of a great essayist, poet, or dramatist. But the method of working by beginning at the beginning, the marshalling of great arguments, the pregnant reflections,—these, if our intellectual life is lived amongst them, are the things from which we draw the stuff for our best work, are the atmosphere, are the cultivators of perception, are the natural enemies of intellectual commonplace, vulgarity, pedantry, obscurantism.

What a revolution, for instance, is implied in Froebel's great discovery, that, to use his own words, "Play is the highest point of human development in the stage of childhood". It is the fount and origin of much (not all) of what we admire and prescribe in the best teaching of young children. But what a dull and mechanical maxim this may become—it has been well denounced in the "Instructions to Inspectors of Elementary Schools," and in a special circular on Varied Occupations,—if it is supposed to mean the use of a particular kind of toy, and romps, and songs. The fact is, it cannot be properly understood without reading its context in the book in which it is arrived at, propounded, and illustrated, in its own quaint, sentimental, and semi-poetic setting. And then see the "high seriousness and deep meaning" which Froebel claims for play set forth in an English way by our own great writer, Robert Louis Stevenson, in his *Virginibus Puerisque*, where he supplies us with a common measure for the little child's game of make-believe and for Shakespeare's *King Lear*.

We must therefore take our strong stand on the great books; on literature, as the most general of studies; on the great masterpieces in all studies, as indispensable to the profitable use of the text book. In the study of education, particularly, the school-management book or the book on psychology is a positive danger unless a classic is read also as an antidote to pedantry; and all the better if it is not read for examination. If narrower studies are to be fruitful, the atmosphere must be broad and wholesome; their roots in the ground, their branches and leaves in the sun and air. The best of text books, from its very nature, must present summaries and conclusions rather than show by what unrestricted processes, independent of the pedantries of established opinions and psychologies, the great thinkers attack perennial problems afresh. Every really great book on teaching is, in its time and place, an instrument of disintegration, an object of ridicule to those who do not read it or read it without sympathy, but a breeze of fine air to those who like their lungs to be filled. The perpetual plague of education is the tendency to become dry and formal, the rule-of-thumb man being the greatest formalist of all; and the practical teacher is observing only a proper precaution in refreshing himself frequently at head-waters.[1]

The "historical" method does not preclude the "scientific" method; it is indeed an essential part of the scientific process. History is a note-book for the student of any science. It records the experiences, the experiments, the achievements, the errors, of other generations. If we neglect the history of a progressive science, we are constantly liable to waste time by covering ground already mastered and even to fall into ancient and confessed errors. The medical man who knows what mistakes his predecessors have made, why they made them, and how those errors were detected and amended, is assuredly a safer practitioner than the man who has worked out the whole of his detailed knowledge solely on the modern text books of medicine and allied sciences.

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[1] I ought here to acknowledge the courtesy of the editor and proprietors of the *Educational Review* in placing at my entire disposal my article on "Atmosphere and Perspective" that appeared in the January, 1899, number.

Logic

So long as Logic does not occupy a foremost place in the ordinary liberal curriculum, where it would be a most profitable substitute for the "accidence" and "analysis" of the current Grammar, it will be the business of the young teacher to devote very early and very earnest attention to the laws of deduction and the logic of discovery as a part of his professional equipment. How constantly teachers sin against the simplest laws of logic in the ordering of their instruction is not to be believed except by those whose business it is to take note. Pupils are persistently invited to draw conclusions and make inferences which a comparatively short drilling in the formal laws of logic would show the teacher to be ridiculous. They are thus demoralised by those very persons and devices that we require to brace and strengthen their powers. Moreover, a method of exposition which is logically exact is also the economical method; not because it is the shortest, but because it leaves nothing to unlearn. A teacher who does not know the fatal logical effects of question-begging, of imperfect definition, of illicit conversion of propositions, of all the fallacies of improper mediate or immediate inference, is pretty certainly a slipshod reasoner. Unless his fairy god-mother brought him logic as a christening gift, he is a dangerous instructor of youth.

Psychology

The study that would seem to be next in importance for the practical teacher is psychology, and particularly the physio-psychology which is represented by such writers, among others, as Professor James and Professor Lloyd Morgan. It is safest to begin with generalisations and practical devices put at our disposal by books so frankly physiological as those of Dr. Warner. No teacher is too young (or too old) to begin to endeavour to interpret mental processes by physical signs. This is the A B C of the teacher's business; and although for complete knowledge we ought to have a complete training in animal physiology, and perhaps biology, mechanics, chemistry, and the rest, yet we are bound (for life is short and art is long) to take a substantial part of our work as done for us in other people's laboratories. The schoolroom gives us ample opportunity for making observations and even crucial experiments without any sort of injury to our subjects. One caution only is to be remembered: an observation or experiment is almost always invalidated if the subject is aware of our operations.

The assumption of an older school of theorists, that psychology gives us a map of mind with which in our hands we could safely traverse the whole field of education, would be valid on two conditions: that we had as many psychologies as there are minds to deal with, and that we had a map of each. Psychology can certainly give us many most useful rules, both positive and negative; but its value is chiefly in its cultivation of a methodically observant attitude. We learn by its aid to translate process into procedure, but, above all things, not to be content with procedure alone.

The personality of the teacher is a very large part of his success or his failure. A man or woman may have

The teacher himself

all the wisdom of all the schools, yet lack of personal acceptability will go far to make the best intellectual and even moral gifts unproductive.

The first necessity is a high standard of life. Good work, or (should we say?) work relatively good, can be done by people of mean views and poor ideals. But the best work is done only by men and women of large heart and habitual singleness of purpose. It is these only who are most secure and steadfast. They are not turned aside by the petty worries and sordid cares of the daily turmoil of school from the great aims which dignify their office and grace all that they do. The great school-masters and school-mistresses live in the minds of their pupils as exemplars of the great saving virtues: honesty, justice, courtesy, courage. Our bearing before the pupils amongst whom so much of our life is spent reflects our inner life in a hundred ways not suspected either by us or by them. Most of us recall only too easily occasions on which we have shirked our duty, evaded difficulties, failed to press home a difficult or disagreeable business, found our stock of patience or courtesy spent. Most of our pupils remember such things more easily than we, and all suffer from them.

We are bound to exact proper respect, but it is our office as teachers, not ourselves as persons, that claims most respect at their hands. It is easy to be too prim and stiff—a feminine fault, some people say, rather than one common in men. Genial "chaff" is a weapon far more potent and infinitely less dangerous than sternness, which should be reserved for such serious cases as deserve moral displeasure.

We become tyrants, if we are not on our guard, in our own despite. Says Abraham Cowley, "I take the profession of a school-master to be one of the most useful, as it ought to be one of the most honourable in a commonwealth; yet certainly all his *fasces* and tyrannical authority over so many bodies take away his own liberty more than theirs".

A gentle and pleasant-sounding voice, a simple manner and few words, ease of demeanour, all are important defences against this danger. Even proper care about personal appearance has its reward; discipline (in the common application of the word) has been known to suffer because of the disrespect bred of so simple a fault as disorder in dress.

It is a teacher's obvious duty to be in good health. Petulance of temper, a "jaundiced" view of venial faults, forgetfulness of one's own youth and youthful failings, impatience in expecting rapid mental operations in immature minds, all these and the like faults may spring out of small *malaises* but develop into habitual ill-temper. We must therefore observe the simple rules of hygiene in our own persons as we would keep tools of precision in perfect order. Overstrain and over-fatigue are bad for both body and mind. One of the first conditions of cheerfulness of soul is soundness of body.

And it is useless to attend to one set of rules if we habitually disregard others. The daily out-door exercise —preferably a game;—the morning tub; carefulness in food; the spare use of strong drinks, alcoholic or other; these are excellent things to bear in mind. But if when we get into our class-room we shut all windows, light gas for purposes of warmth, misuse our voices and so forth, our other precautions are largely in vain.

For the rest, we cannot aim too high; but it is not possible to be straining at every moment after a high ideal. We must cultivate character in ourselves as in our pupils, so that the pursuit of the great aim may be easy because it is habitual. Every now and then we must call a halt and refresh ourselves by a review of our own spiritual forces. This alone, with the aid of the stimulus provided in great literature, can save us from the tedium and depression to which the uninspired and vulgar life is subject. On one condition. We must think nobly of the individual soul, and no way approve the opinion of those who, seeing nothing but the poor tenements that it sometimes inhabits, do not recognise its infinite capacity for expansion and improvement. To educate well, we must believe in the ultimate triumph of good education, because we fight on the same side as the stars in their courses.

Education is a constant force; so many souls, so much endeavour to influence other souls. It is as foolish to say that we have "too much education" as it would be to say that we have too much Gravity or too much Electricity. Education operates wherever ideas are alive; for good or for evil; whether we like it or not. The purpose of the wise organisation of this ever-active social force is to make it tend to conservation and not destruction. Of education rightly directed we cannot have too much.

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